

DOWNLOAD MANAGEMENT OF MULTIMEDIA FILES

Submitted in partial fulfillment of the requirements
for the award of
Bachelor of Engineering Degree in Computer Science and Engineering

By

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SATHYABAMA

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(Established under Section 3 of UGC Act, 1956)

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING BONAFIDE CERTIFICATE

This is to certify that this project report is the bonafide work of **PALURI PRADEEP KUMAR (37110582)** and **POTHAMSETTI SAI VENKATA REDDY (37110572)** who carried out the project entitled **Download Management of Multimedia Files** under my supervision from **August 2020** to **March 2021**.

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ABSTRACT

Download Manager gives quickened download speed and adaptability in highlights. Its engaging quality lies behind video content preparing and programmed treatment of downloads. This paper investigations Download Manager exercises recorded across different documents that incorporates Windows Registry, history and log records from antiques assortment see point. In the event of download directors, the first concerns are establishment area, download way, downloaded document, URL address, login qualifications for secret key secured sites, date and time the action was performed. It downloads general records and recordings from YouTube and huge loads of other streaming sites, and it will continue uncompleted downloads, download whole video playlist or chose recordings.

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LIST OF ABBREVIATIONS

ABBREVIATION

EXPANSION

IDM	Internet Download Manager
URL	Uniform Resource Locator
IDE	Integrated Development Environment
HTTP	Hyper Text Transfer Protocol
HTTPS	Hyper text Transfer Protocol Secure
FTP	File Transfer Protocol
TCP	Transfer Control Protocol
OS	Operating System
IOS	Iphone Operating System
SQL	Structured Query Language
GUI	Graphical User Interface
UI	User Interface
MPEG	Moving Picture Experts Group
MMS	Multimedia Message Service

CHAPTER 1

INTRODUCTION

INTRODUCTION ON PROJECT

A download manager is a computer program dedicated to the task of downloading possibly unrelated stand-alone files from the internet for storage. This is unlike a World Wide Web browser, which is mainly intended to browse web pages, composed of a multitude of smaller files, where error-free moving of files for permanent storage is of secondary importance. The typical download manager at a minimum provides means to recover from errors without losing the work already completed, and can optionally split the file to be downloaded into two or more segments, which are then moved in parallel, potentially making the process faster within the limits of the available bandwidth. Multi-source is the name given to files that are downloaded in parallel.

Download managers are useful for very active Internet users. For dial-Up users, they can automatically dial the Internet Service Provider at night, when rates or tariffs are usually much lower, download the specified files, and hang-up. They can record which links the user clicks on during the day, and queue these files for later download. For broadband users, download managers can help download very large files by resuming broken downloads, by limiting the bandwidth used, so that internet activities are not affected and the server is not overloaded, or by automatically navigating a site and downloading pre-specified content like photo galleries, MP3 collections, etc. This can also include automatically downloading whole sites and regularly updating them. It downloads general files and videos from youtube and tons of other streaming websites, and it will resume uncompleted downloads, download entire video playlist or customized videos. Many download managers support Metalink, an XML file listing mirrors, checksums, and other information useful for downloading. Download manager can be widely used that runs on Windows operating systems. It supports HTTP, HTTPS, FTP and MMS protocols. IDM file management system maintains multiple categories of downloaded files depending on their file type. Download manager provides seamless integration with most popular web browsers. The unorthodox support of downloading webpage embedded videos distinguishes it from other standard download managers.

PURPOSE

The purpose of this proposed system i.e. download management of multimedia files is to download the large multimedia files very with very fast speed with a simple url which contains the multimedia files like documents,music,videos,etc.This download manager also helps us in pause and resume the downloads whenever needed.In case of any network connectivity issue if the download fails the download automatically resumes wherever it stopped when the connectivity issue is solved.This also helps us to download the customized video playlists from the streaming websites.This proposed system also helps to customize our downloads, for example we can pause the large file downloads so that the small sized files will downloads fast.This proposed system also have a methadology to download large files very fast by splitting the file into small files so that fastens download process.

MOTIVATION

The purpose of this proposed system i.e. download management of multimedia files is working towards fastest download of multimedia files without any loss of progression of completed tasks and saving the time using the latest technology and simple instructions is the main motive to build this Download Manager

CHAPTER 2

LITERATURE SURVEY

ANALYSIS OF THE LITERATURE

Literature survey is the main advance in programming improvement measure. Prior to building up the instrument it is important to decide the time factor, economy and friends strength. When these things are fulfilled, at that point the subsequent stage is to figure out which working framework and language can be utilized for building up the device. When the developers begin assembling the apparatus the software engineers need parcel of outer help. This help can be gotten from senior developers, from book or from sites. The major part of the project development sector considers and fully survey all the required needs for developing the project. Before developing the tools and the associated designing it is necessary to determine and survey the time factor, resource requirement, man power, economy, and company strength. Prior to building the framework the above thought are considered for building up the proposed framework. The significant piece of the undertaking advancement area considers and completely survey all the necessary requirements for building up the venture. For each undertaking Literature survey is the main area in programming improvement measure. Prior to building up the instruments and the related planning it is important to decide and survey the time factor, asset prerequisite, labor, economy, and friends strength. When these things are fulfilled and completely surveyed, at that point the following stage is to decide about the product details in the separate framework, for example, what kind of working framework the venture would require and what are largely the important programming are expected to continue with the subsequent stage like building up the apparatuses, and the related activities. Here we have taken the general surveys of different creators and noted down the fundamental central issues with respect to their work. In this venture literature survey assumes a prevailing part in get assets from different areas and all the connected points that are exceptionally valuable under this segment. The most awesome aspect if this is the manner in which things get all together and encourages us to suite our work according to the current information.

LITERARY REVIEWS

“Analysis of download accelerator plus” Yasin M, Wahla MA, Kausar F(2009)

IDM sorts out downloaded records by their document types in a few default and client made classes. The default classifications for downloading records are Music, Compressed Documents, Video and Programs. In 'Hacking Tools', name of client made class. It has prominent and basic data about the client interests and download exercises for an agent while reviewing questionable framework. Windows library oversees class settings inside sub-keys under 'FoldersTree'. 1. It is involved classification name as the title of sub-key, upheld expansions, interesting Identity and download index way. Each download document contains a key worth 'categoryID' which addresses the special ID of classification. Exceptional ID can be acquainted with relate the class of each downloaded document. Table 1 on next page depicts the relating ID's of classes. It merits referencing that the client made classification extraordinary ID begins from 64 forward. Windows Registry keeps data pretty much completely downloaded documents.

“Analysis of download manager” Yasin M, Wahla MA, Kausar F(2009)

It keeps up each downloaded document as sub-key of 'Download Manager'. Each downloaded document is addressed with a File ID for example '6'. The succession of File ID begins from three instead of one. The worth '6' addresses that client has downloaded forward document. The File ID is increased with esteem one for each new document. The priceless and fundamental key estimations of downloaded records are document name, document size, date of adding a URL address to IDM for downloading a document, URL address, login qualifications, download index way, Category ID and status of document. Naturally IDM utilizes 'mysterious' as username and 'IEUser' as secret key for client that doesn't give login certifications.

“https://en.wikipedia.org/wiki/Internet_Download_Manager”(2020)

Internet Download Manager (IDM) is a tool that manages and schedule downloads. It can use full bandwidth. It has recovery and resume capabilities to restore the interrupted downloads due to lost connection, network issues, and power outages. IDM supports a wide range of proxy servers such as firewall, FTP, and HTTP protocols, redirected cookies, MP3 audio and MPEG video processing. It efficiently collaborates with Google Chrome, Internet Explorer, Mozilla Firefox, Opera and other popular browsers to manage the download.

“https://en.wikipedia.org/wiki/Internet_Download_Manager”(2020)Internet Download Manager Features

Internet Download Manager supports all popular browsers including IE, Chrome, AOL, MSN, Mozilla, Netscape, Firefox, Avant Browser, and many others. Internet Download Manager supports all versions of all popular browsers, and it can be integrated into any Internet application to take over downloads using unique "Advanced Browser Integration" feature. When you click on a download link in a browser, IDM will take over the download and accelerate it. You don't need to do anything special, just browse the Internet as you usually do. IDM will catch your downloads and accelerate them. IDM supports HTTP, FTP, HTTPS and MMS protocols. Internet Download Manager will resume unfinished download from the place where they left off. Comprehensive error recovery and resume capability will restart broken or interrupted downloads due to lost or dropped connections, network problems, computer shutdowns, or unexpected power outages.

“Windows Registry Record” Vivienne, M., Theodore T., Iain S.(2006)

Windows Registry records information necessary to configure the system. Thus, it provides important source of evidence from forensic perspective. Applications which utilize registry to store data generally include web browsers, instant messengers, P2P networks, email systems and download managers. Web browsers such as Internet Explorer, Opera, Netscape and Firefox keep their activities in registry. Internet Explorer records typed URL's, last download directory and reference of index.dat file which keeps record of web activities. Opera, Netscape and Firefox leave limited footprints in the registry. Instant Messengers (AOL Messenger, ICQ Messenger, Windows Live Messenger, Yahoo Messenger and MSN Messenger) also leave traces in the Windows Registry. Outlook and Outlook Express store username, password and unread emails in Windows Registry. Limewire leaves minimal footprints of user activity (having no logs of searches and downloaded files) in registry among P2P networks. Kaaza stores connection information and download directory path. Morpheus keeps log of recently searched keywords or phrases.

“Windows Registry Examination” Derrick J., Carvey, H.(2006)

Windows registry is an invaluable source for digital investigators to examine, investigate and collect evidence from Windows operating systems. A key to access registry information is to know its location within the structure of the registry itself. The information, collected from registry and file system, can be correlated to provide a comprehensive picture of the downloaded activities to the examiners. Windows registry contains download activity entries especially related to DAP under the branch HKEY_USERS\SID\Software\SpeedBit\Download Accelerator. This describes the logical view of windows registry using Registry Editor (Windows default registry editor), the left pane of the figure shows the tree of all keys of Download Accelerator and right pane shows the values of password protected website `http://aabbcc.com`. This section highlights important registry keys and describes how these can be beneficial to analyze download activities on suspected computer.

CHAPTER 3

AIM AND SCOPE

AIM OF PROJECT

The primary aim of this proposed system i.e. download management of multimedia files is to download the large multimedia files very with very fast speed with a simple url which contains the multimedia files like documents,music,videos,etc.This download manager also helps us in pause and resume the downloads whenever needed.In case of any network connectivity issue if the download fails the download automatically resumes wherever it stopped when the connectivity issue is solved.This also helps us to download the customized video playlists from the streaming websites.This proposed system also helps to customize our downloads, for example we can pause the large file downloads so that the small sized files will downloads fast.This proposed system also have a methadology to download large files very fast by splitting the file into small files so that fastens download process.Download Manager gives quickened download speed and adaptability in highlights. Its engaging quality lies behind video content preparing and programmed treatment of downloads. This paper investigations Download Manager exercises recorded across different documents that incorporates Windows Registry, history and log records from antiques assortment see point. In the event of download directors, the first concerns are establishment area, download way, downloaded document, URL address, login qualifications for secret key secured sites, date and time the action was performed. It downloads general records and recordings from YouTube and huge loads of other streaming sites, and it will continue uncompleted downloads, download whole video playlist or chose recordings.

OBJECTIVE

The proposed model "Download management of multimedia files" is based on the new technologies which makes the whole process efficient. It is going to be very important and profitable for the people who wants to download the multimedia files. This system will provide more accurate information like time & percentage of the downloads, place of the storage etc. which will be very helpful.

SCOPE

This model will help in downloading the large files super fast and also helps us in customizing the path location. This project mainly focuses on downloading the multimedia files. Download Manager can pause or resume our downloads whenever needed. It can also customize our downloads by selecting files we wanted or the entire playlist can be downloaded at once. It also helps downloading large files over wifi. Location of the video so that it is easy to spot the file. It also helps us in customizing the download or else it can download the entire playlist at one go. The main use of this proposed system is many of the streaming platforms like youtube allows only to stream and download only in that platform. This youtube videos can't be able to download in local disk, so this proposed model "Download management of multimedia files" helps us in downloading videos in local storage with the help of a simple url which contains the data like music, videos, playlist, files in it. This proposed model helps in downloading files faster than the user download manager does.

ADVANTAGES

- Resuming broken or paused downloads.
- Downloading files on poor connections.
- Automatic recursive downloads.
- Pausing the downloading of large files.
- Scheduled downloads.
- Variable bandwidth usage.

CHAPTER 4

SYSTEM DESIGN & METHODOLOGY

EXISTING SYSTEM

In the depiction given underneath we have discussed the framework utilized by the different Organization and Institutes for talking. We are depicting the nature, reason and constraint of their current framework, and how we have dealt with improve the usefulness of their framework in the new framework. Existing framework can possibly work, if web office is given, which bring about significant expense. Individual not having a place with the association can likewise meddle and can attempt to break the security of the authoritative information. In the framework utilized by the different Organization's and foundations, correspondence is by and large being held every now and again. The organizations utilized phones, fax and email frameworks to speak with one another wherein excess of information is ordinary. A great deal of work must be accomplished for each assignment for mailing and fax. Other than this all the administration is likewise troublesome and client needs to rely on the administrations of ISPs for a really long time superfluously. The current framework has a few constraints and downsides so change to a superior and powerful framework

PROBLEM WITH EXISTING SYSTEM

The existing system has several limitation and draw backs so switch to a better and effective system.

- Low functionality
- Security Problem
- Future improvement is difficult
- Miscellaneous

FEASIBILITY STUDY

The objective of feasibility study is to examine the technical, operational and economical viability.

TECHNICAL FEASIBILITY

Technical feasibility center on the existing computer system(hardware, software etc) and to what extent it can support the proposed addition. In our proposed solution formulated, did not require any additional technology. Hence the system is

technically feasible. The entire solution enlisted does not require any additional software for this solution.

ECONOMIC FEASIBILITY

More commonly known as cost benefit analysis, the procedure is to determine the benefits and savings that are expected from proposed system compare them with cost. The proposed system utilizes the currently available technologies. The cost during The development of the product is low. The interface and the scripts used are as simple as it could be. Therefore the net cost in its development is less.

OPERATIONAL FEASIBILITY

Organizational, political and human aspects are considered in order to ensure that the proposed system will be workable when implemented.

PROPOSED SYSTEM

The proposed model "Download management of multimedia files" is based on the new technologies which makes the whole process efficient. The proposed model "Download management of multimedia files" is based on the new technologies which makes the whole process efficient. This model will help in downloading the large files super fast and also helps us in customizing the path location. This project mainly focuses on downloading the multimedia files. Download Manager can pause or resume our downloads whenever needed. It can also customize our downloads by selecting files we wanted or the entire playlist can be downloaded at once. It also helps downloading large files over wifi. Location of the video so that it is easy to spot the file. It also helps us in customizing the download or else it can download the entire playlist at one go. The main use of this proposed system is many of the streaming platforms like youtube allows only to stream and download only in that platform. This youtube videos cant be able to download in local disk, so this proposed model "Download management of multimedia files" helps us in downloading videos in local storage with the help of a simple url which contains the data like music, videos, playlist, files in it. This proposed model helps in downloading files faster than the user download manager does. The advantages of this proposed system are resuming broken or paused downloads (especially for very large files), downloading files on poor connections, Downloading several files from a site automatically according to simple rules, automatic recursive downloads, pausing the download of large files, scheduled downloads (including, automatic hang-up and shutdown), variable bandwidth usage. Internet Download Manager (IDM) provides

accelerated download speed and flexibility in features. Its attractiveness lies behind video content processing and automatic handling of downloads. This proposed system analyzes IDM activities recorded across multiple files that includes Windows Registry, history and log files from artefacts collection view point. Download Manager gives quickened download speed and adaptability in highlights. Its engaging quality lies behind video content preparing and programmed treatment of downloads. This paper investigations Download Manager exercises recorded across different documents that incorporates Windows Registry, history and log records from antiques assortment see point. In the event of download directors, the first concerns are establishment area, download way, downloaded document, URL address, login qualifications for secret key secured sites, date and time the action was performed. It downloads general records and recordings from YouTube and huge loads of other streaming sites, and it will continue uncompleted downloads, download whole video playlist or chose recordings.

ARCHITECTURAL DESIGN

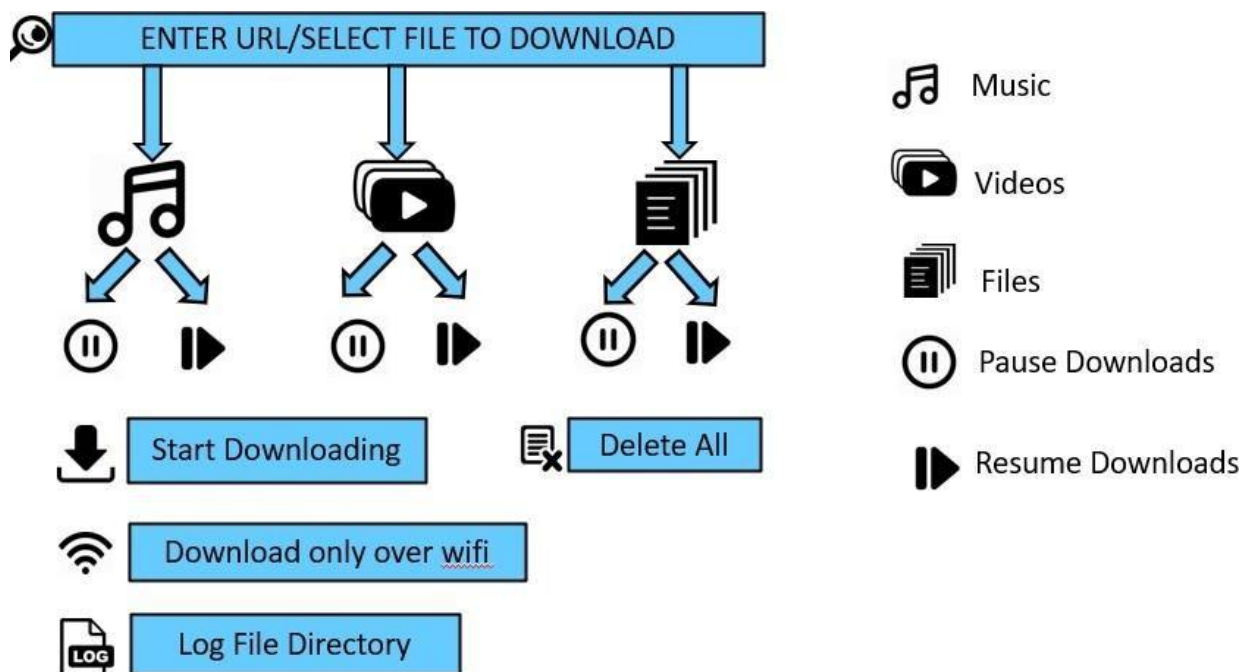


FIG 4.3.1 ARCHITECTURAL DESIGN

The above figure 3.3.1 explains about architecture the proposed system [Download management of multimedia files]. This proposed system download the multimedia files with the help of the URL. So the URL contains data in it which consists of multimedia files like music, videos, files, documents etc. This proposed system also helps in managing the downloads by buttons which are created using the PyQt5 framework. This framework consists of PyQt context, PyQt widgets, PyQt design. These tools help in designing the proposed system i.e., widgets are used for creating the buttons whereas context is used for guiding the buttons to do which operation for example like pausing or resuming the downloads. Qt designer is used for designing our proposed system like adding themes to the download managers to make the interface more attractive. By clicking the start button the download manager starts downloading the content in the URL which is provided by the user. The resume button is used to resume the paused downloads. Likewise pause button is used to pause the downloads. This download manager also helps to download the large files over wifi. This proposed system also helps downloading the customized videos which are selected by the user or the entire playlist can be downloaded on a single go. This also helps in deleting all files at a time or else customization deletion is also available.

REQUIREMENT ANALYSIS

This proposed software runs effectively on a computing system that has the minimum requirements. Undertaking all the equipment necessities are not satisfied but rather exist in their systems administration between the customer's machines already. So the main need is to introduce appropriate equipment for the product. The requirements are split into two categories, namely:

SOFTWARE REQUIREMENT

The basic software requirements to run the program are:

1. Operating System: Microsoft Windows XP, Windows 7, Windows 9, Windows 10
2. Software: Python 3.4 & above

HARDWARE REQUIREMENT

1. Hard Disk: 500GB & above
2. RAM: 4GB & above
3. Processor: i3 & above

SYSTEM FUNCTIONALITIES

Requirement analysis, also called requirement engineering, is the process of determining user expectations for a new modified product. It encompasses the tasks that determine the need for analyzing, documenting, validating and managing software or system requirements. The requirements should be documentable, actionable, measurable, testable and traceable related to identified business needs or opportunities and define to a level of detail, sufficient for system design.

FUNCTIONAL REQUIREMENTS

It is a technical specification requirement for the software products. It is the first step in the requirement analysis process which lists the requirements of particular software systems including functional, performance and security requirements. The function of the system depends mainly on the quality hardware used to run the software with given functionality.

i. Usability

It specifies how easy the system must be use. It is easy to ask queries in any format which is short or long, porter stemming algorithm stimulates the desired response for user.

ii. Robustness

It refers to a program that performs well not only under ordinary conditions but also under unusual conditions. It is the ability of the user to cope with errors for irrelevant queries during execution.

iii. Security

The state of providing protected access to resource is security. The system provides good security and unauthorized users cannot access the system there by providing high security.

iv. Reliability

It is the probability of how often the software fails. The measurement is often expressed in MTBF (Mean Time between Failures). The requirement is needed in order to ensure that the processes work correctly and completely without being aborted. It can handle any load and survive and survive and even capable of working around any failure

v. Compatibility

It is supported by version above all web browsers. Using any web servers like local host makes the system real-time experience.

vi. Flexibility

The flexibility of the project is provided in such a way that it has the ability to run on different environments being executed by different users.

vii. Safety

Safety is a measure taken to prevent trouble. Every query is processed in a secured manner without letting others to know one's personal information.

NON-FUNCTIONAL REQUIREMENTS

Non-functional requirement (NFR) is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors. They are contrasted with functional requirements that define specific behavior or functions. The plan for implementing non-functional requirements is detailed in the system architecture, because they are usually architecturally significant requirements.

i. Portability

It is the usability of the same software in different environments. The project can be run in any operating system.

ii. Performance

These requirements determine the resources required, time interval, throughput and everything that deals with the performance of the system.

iii. Accuracy

The result of the requesting query is very accurate and high speed of retrieving information. The degree of security provided by the system is high and effective.

iv. Maintainability

Project is simple as further updates can be easily done without affecting its stability. Maintainability basically defines that how easy it is to maintain the system. It means that how easy it is to maintain the system, analyze, change and test the application. Maintainability of this project is simple as further updates can be easily done without affecting its stability.

LANGUAGE OVERVIEW

To implement this proposed project `Download Management Of Multimedia Files` python or pycharm IDE can be used.

PYTHON

Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together. Python's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance. Python supports modules and packages, which encourages program modularity and code reuse. The Python interpreter and the extensive standard library are available in source or binary form without charge for all major platforms, and can be freely distributed.

Often, programmers fall in love with Python because of the increased productivity it provides. Since there is no compilation step, the edit- test-debug cycle is incredibly fast. Debugging Python programs is easy: a bug or bad input will never cause a segmentation fault. Instead, when the interpreter discovers an error, it raises an exception. When the program doesn't catch the exception, the interpreter prints a stack trace. A source level debugger allows inspection of local and global variables, evaluation of arbitrary expressions, setting breakpoints, stepping through the code a line at a time, and so on. The debugger is written in Python itself, testifying to Python's introspective power. On the other hand, often the quickest way to debug a program is to add a few print statements to the source:

the fast edit-test-debug cycle makes this simple approach very effective. Python is an interpreted, high-level and general-purpose programming language. Python is an interpreted, high level and general-purpose programming language. Python's design philosophy emphasizes code readability with its notable use of significant indentation. Its language constructs and object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects. Python is dynamically-typed and garbage-collected. It supports multiple programming paradigms, including structured object-oriented and functional programming. Python is often described as a "batteries included" language due to its comprehensive standard library.

PYCHARM

PyCharm is an integrated development environment (IDE) used in computer programming, specifically for the Python language. It is developed by the Czech company JetBrains. It provides code analysis, a graphical debugger, an integrated unit tester, integration with version control systems, and supports web development with Django as well as Data Science with Anaconda. PyCharm is cross-platform, with Windows, macOS and Linux versions. The Community Edition is released under the Apache License, and there is also Professional Edition with extra features – released under a proprietary license. Many programmers nowadays opt for Python to build software applications with concise, clean, and readable code base. They can even accelerate custom software application development by taking advantage of a number of integrated development environments (IDEs) for Python. PyCharm is one of the most widely used IDEs for Python programming language. At present, the Python IDE is being used by large enterprises like Twitter, Pinterest, HP, Symantec and Groupon. JetBrains has developed PyCharm as a cross-platform IDE for Python. In addition to supporting versions 2.x and 3.x of Python, PyCharm is also compatible with Windows, Linux, and macOS. At the same time, the tools and features provided by PyCharm help programmers to write a variety of software applications in Python quickly and efficiently. The developers can even customize the PyCharm UI according to their specific needs and preferences. Also, they can extend the IDE by choosing from over 50 plug-ins to meet complex project requirements.

FEATURES AND TOOLS PROVIDED BY PYCHARM

i. Code Editor

The intelligent code editor provided by PyCharm enables programmers to write high quality Python code. The editor enables programmers to read code easily through colour schemes, insert indents on new lines automatically, pick the appropriate coding style, and avail context-aware code completion suggestions. At the same time, the programmers can also use the editor to expand a code block to an expression or logical block, avail code snippets, format the code base, identify errors and misspellings, detect duplicate code, and auto-generate code. Also, the editor makes it easier for developers to analyze the code and identify the errors while writing code.

ii. Code Navigation

The smart code navigation options provided by PyCharm help programmers to edit and improve code without putting extra time and effort. The IDE makes it easier for programmers to go to a class, file and symbols, along with the go to declarations invoked from a reference. The user can even find an item in the source code, code snippet, UI element, or user action almost immediately. They can further locate usage of various symbols, and set bookmarks in the code. At the same time, the developers can even take advantage of the code navigation feature to scrutinize the code thoroughly in the lens mode.

iii. Refactoring

PyCharm makes it easier for developers to implement both local and global changes quickly and efficiently. The developers can even take advantage of the refactoring options provided by the IDE while writing plain Python code and working with Python frameworks. They can avail the rename and move refactoring for files, classes, functions, methods, properties, parameters, and local/global variables. Likewise, they can improve code quality by extracting variables, fields, constants, and parameters. Also, PyCharm allows programmers to break up longer classes and methods through extract method.

iv. Support for Popular Web Technologies

PyCharm makes it easier for programmers to write various web applications in Python supporting widely used web technologies like HTML, CSS, JavaScript, TypeScript and CoffeeScript. The web developers can use the live editing preview option provided by the IDE to view a single web page simultaneously in the editor and browser. At the same time, the live edit feature provided by the IDE enables programmers to see the changes made to the code instantaneously on a web browser. PyCharm further allows developers to avail a JavaScript debugger as well as CoffeeScript and TypeScript editors. It even simplifies isomorphic web application development by supporting both AngularJS and NodeJS.

v. Support for Popular Python Web Frameworks

In addition to supporting commonly used web technologies, PyCharm also provides first-class support for a robust Python web framework like Django. The developers can use the IDE to avail code completion suggestions for Django tags, filters,

parameters, and template variables. Also, they can gather additional information about tags and filters by referring to the quick documentation. The Python IDE even helps web developers to debug Django templates, format the code, verify the code, and manage .py consoles. At the same time, PyCharm also supports widely used Python web frameworks like Pyramid and Web2Py. It provides code completion and navigation options specific to Pyramid. Likewise, it allows web developers to avail code completion and navigation options while working with Web2Py.

vi. Support for Python Scientific Libraries

PyCharm further helps programmers to use Python more efficiently in big data and data science projects. It supports some of the widely used scientific libraries for Python — NumPy, Anaconda and Metplotlib. The developers can work efficiently with these scientific libraries by availing the interactive graphs, deep code insight, and array viewers provided by the IDE. They can even run the REPL Python console provided by PyCharm to avail robust features like on-the-fly syntax check and code inspection. At the same time, the programmers can also integrate the IDE seamlessly with IPython Notebook to create innovative solutions without putting extra time and effort.

vii. Database Tools

In addition to supporting various Python libraries and frameworks, PyCharm allows developers to work with a number of relational databases including Oracle, SQL Server, MySQL and PostgreSQL. The developers can further use the IDE to run queries, edit SQL code, browse data, alter table data, and alter/analyze schemas. PyCharm further supports SQLAlchemy library and inject SQL code into code written in various programming languages. The professional edition of the IDE further makes it easier for developers to handle large volumes of data efficiently through data grids.

viii. Visual Debugger

The visual debugger provided by the IDE helps programmers to debug Python, JavaScript, and Django code. The developers can use the inline debugger to see live debugging data directly on the editor. Likewise, they can debug multiple Python processes simultaneously and step through the code bypassing libraries. PyCharm further creates reusable and customizable configuration for each test script or

debugger execution. The users even have option to facilitate remote debugging by integrating the visual debugger with remote interpreters.

ix. Software Testing

Like other IDEs, PyCharm also comes with features and tools to simplify Python application testing. It allows developers to perform unit testing through popular Python testing frameworks like Nose, Attest and Doctests. The testers even have option to run individual or multiple test files and test classes. They can further integrate the IDE with Coverage.py to measure code coverage while testing the applications. While testing multi-threaded applications, the testers can use the thread concurrency visualization option provided by the IDE to control the application fully and efficiently. At the same time, PyCharm enables users to deliver high quality software by implementing behavior-driven development (BDD).

MODULES

The modules that are used in this proposed system [Download Management Of multimedia files] are PyQt5 Framework which consists of Qt Widgets, Qt Context, Qt Design, Qt Gui, Qt Core.

PyQt Framework

PyQt brings together the Qt C++ cross-platform application framework and the cross-platform interpreted language python. Qt is more than a GUI toolkit. It includes abstractions of network sockets, threads, Unicode, regular expressions, SQL databases, SVG, OpenGL, XML, a fully functional web browser, a help system, a multimedia framework, as well as a rich collection of GUI widgets. Qt classes employ a signal/slot mechanism for communicating between objects that is type safe but loosely coupled making it easy to create re-usable software components. Qt also includes Qt Designer, a graphical user interface designer. PyQt is able to generate Python code from Qt Designer. It is also possible to add new GUI controls written in Python to Qt Designer. Python is a simple but powerful object-orientated language. Its simplicity makes it easy to learn, but its power means that large and complex applications can be created. Its interpreted nature means that Python programmers are very productive because there is no edit/compile/link/run development cycle. Much of Python's power comes from its comprehensive set of extension modules providing a wide variety of functions

including HTTP servers, XML parsers, database access, data compression tools and, of course, graphical user interfaces. Extension modules are usually implemented in either Python, C or C++. Using tools such as SIP it is relatively straight forward to create an extension module that encapsulates an existing C or C++ library. Used in this way, Python can then become the glue to create new applications from established libraries. PyQt combines all the advantages of Qt and Python. A programmer has all the power of Qt, but is able to exploit it with the simplicity of Python. PyQt is a set of Python bindings for The Qt Company's Qt application framework and runs on all platforms supported by Qt including Windows, macOS, Linux, iOS and Android. PyQt6 supports Qt v6, PyQt5 supports Qt v5 and PyQt4 supports Qt v4. The bindings are implemented as a set of Python modules and contain over 1,000 classes. PyQt5 is a set of Python bindings for v5 of the Qt application framework from The Qt Company. Qt is a set of C++ libraries and development tools that includes platform independent abstractions for graphical user interfaces, networking, threads, regular expressions, SQL databases, SVG, OpenGL, XML, user and application settings, positioning and location services, short range communications (NFC and Bluetooth), web browsing, 3D animation, charts, 3D data visualisation and interfacing with app stores. PyQt5 implements over 1000 of these classes as a set of Python modules.

PyQt5 is cross-platform GUI toolkit, a set of python bindings for Qt v5. One can develop an interactive desktop application with so much ease because of the tools and simplicity provided by this library. A GUI application consists of Front-end and Back-end. PyQt5 has provided a tool called 'QtDesigner' to design the front-end by drag and drop method so that development can become faster and one can give more time on back-end stuff. Finally, PyQt5 contains the specification files that allow bindings for other Qt based class libraries that further extend PyQt5 to be developed and installed.

PyQt5 comprises PyQt5 itself and a number of add-ons that correspond to Qt's additional libraries. Each is provided as a source distribution (*sdist*) and binary wheels for Windows, Linux and macOS. PyQt5 comprises a number of different components. First of all there are a number of Python extension modules. These are all installed in the PyQt5 Python package and are described in the list of modules. PyQt5 contains plugins that enable Qt Designer

and qmlscene to be extended using Python code. See Writing Qt Designer Plugins and Integrating Python and QML respectively for the details.

PyQt5 also contains a number of utility programs.

- pyuic5 corresponds to the Qt uic utility. It converts QtWidgets based GUIs created using Qt Designer to Python code.
- pyrcc5 corresponds to the Qt rcc utility. It embeds arbitrary resources (eg. icons, images, translation files) described by a resource collection file in a Python module.
- pylupdate5 corresponds to the Qt lupdate utility. It extracts all of the translatable strings from Python code and creates or updates .ts translation files. These are then used by Qt Linguist to manage the translation of those strings.

Qt Gui

Qt is used for developing graphical user interfaces (GUIs) and multi-platform applications that run on all major desktop platforms and most mobile or embedded platforms. Most GUI programs created with Qt have a native-looking interface, in which case Qt is classified as a widget toolkit. The Qt GUI module provides classes for windowing system integration, event handling, OpenGL and OpenGL ES integration, 2D graphics, basic imaging, fonts and text.

Qt Core

The Qt Core module adds these features to C++: a very powerful mechanism for seamless object communication called signals and slots. queryable and designable object properties. hierarchical and queryable object trees that organize. Qt is used for developing graphical user interfaces (GUIs) and multi-platform applications that run on all major desktop platforms and most mobile or embedded platforms. Most GUI programs created with Qt have a native-looking interface, in which case Qt is classified as a widget toolkit.

The Qt Core module adds these features

- A very powerful mechanism for seamless object communication called signals and slots
- Queryable and designable object properties
- Hierarchical and queryable object trees that organize

- Object ownership in a natural way with guarded pointers (QPointer)
- A dynamic cast that works across library boundaries

Qt Widgets

Qt is used for developing graphical user interfaces (GUIs) and multi-platform applications that run on all major desktop platforms and most mobile or embedded platforms. Most GUI programs created with Qt have a native-looking interface, in which case Qt is classified as a widget toolkit. The Qt Widgets Module provides a set of UI elements to create classic desktop-style user interfaces. See the User Interfaces overview for more information on using widgets. Widgets are the primary elements for creating user interfaces in Qt. Widgets can display data and status information, receive user input, and provide a container for other widgets that should be grouped together. A widget that is not embedded in a parent widget is called a window. The QWidget class provides the basic capability to render to the screen, and to handle user input events. All UI elements that Qt provides are either subclasses of QWidget, or are used in connection with a QWidget subclass. Creating custom widgets is done by subclassing QWidget or a suitable subclass and reimplementing the virtual event handlers. Widgets are the basic building blocks for graphical user interface (GUI) applications built with Qt. Each GUI component (e.g. buttons, labels, text editor) is a widget that is placed somewhere within a user interface window, or is displayed as an independent window.

Qt Context

Qt is used for developing graphical user interfaces (GUIs) and multi-platform applications that run on all major desktop platforms and most mobile or embedded platforms. Most GUI programs created with Qt have a native-looking interface, in which case Qt is classified as a widget toolkit. Context menu in Qt is used QMenu class. When performing actions that should cause the menu handler is called, which creates the menu and binds handlers to act in this menu.

Qt Designer

Qt is used for developing graphical user interfaces (GUIs) and multi-platform applications that run on all major desktop platforms and most mobile or embedded platforms. Most GUI programs created with Qt have a native-looking interface, in which case Qt is classified as a widget toolkit. *Qt Designer* is the Qt tool for

designing and building graphical user interfaces (GUIs) with Qt Widgets. You can compose and customize your windows or dialogs in a what-you-see-is-what-you-get (WYSIWYG) manner, and test them using different styles and resolutions. Widgets and forms created with *Qt Designer* integrate seamlessly with programmed code, using Qt's signals and slots mechanism, so that you can easily assign behavior to graphical elements. All properties set in *Qt Designer* can be changed dynamically within the code. Furthermore, features like widget promotion and custom plugins allow you to use your own components with *Qt Designer*. You have the option of using Qt Quick for user interface design rather than widgets. It is a much easier way to write many kinds of applications. It enables a completely customizable appearance, touch-reactive elements, and smooth animated transitions, backed up by the power of OpenGL graphics acceleration.

Libraries

The libraries that are used in this proposed system "Download Management Of multimedia files" are pafy, humanize, sys, os and os.path.

Pafy

Pafy is a Python library to download YouTube content and retrieve metadata. Pafy objects relate to videos hosted on YouTube. They hold metadata such as title, viewcount, author and video ID. Stream objects relate to individual streams of a YouTube video. They hold stream-specific data such as resolution, bitrate and url. Each Pafy object contains multiple stream objects.

Features of pafy

- Retrieve metadata such as viewcount, duration, rating, author, thumbnail, keywords.
- Download video or audio at requested resolution / bitrate / format / filesize.
- Command line tool (yt dl) for downloading directly from the command line.
- Download video only (no audio) in m4v or webm format.
- Download audio only (no video) in ogg or m4a format.
- Works with Python 2.6+ and 3.3+.

- Optionally depends on youtube-dl (recommended; more stable).

Humanize

Humanize is a package in python which contains various humanization utilities like turning a number into a human-readable size or throughput or number. In this article, we will discuss how to install this package and what are the different utilities present in this package. This package offers various utilities which can be used on the numbers to make the numbers easily readable for the humans. In our proposed system we use file size utility. This utility can convert large integers of file sizes to human-readable form. The default unit of the size it accepts is bytes. And by these utility the percentage of completion of download is provided in number format which can be understood by human.

Sys

The sys module in Python provides various functions and variables that are used to manipulate different parts of the Python runtime environment. It allows operating on the interpreter as it provides access to the variables and functions that interact strongly with the interpreter. The sys modules provide variables for better control over input or output. We can even redirect the input and output to other devices. The python sys module provides functions and variables which are used to manipulate different parts of the Python Runtime Environment. It lets us access system-specific parameters and functions.

Os

The OS module in Python provides functions for interacting with the operating system. OS comes under Python's standard utility modules. This module provides a portable way of using operating system-dependent functionality. The `*os*` and `*os.path*` modules include many functions to interact with the file system. It is possible to automatically perform many operating system tasks. The OS module in Python provides functions for creating and removing a directory (folder), fetching its contents, changing and identifying the current directory, etc. You first need to import the os module to interact with the underlying operating system. So, import it using the `import os` statement before using its functions.

Os Path

This module contains some useful functions on pathnames. The path parameters are either strings or bytes . These functions here are used for different purposes such as for merging, normalizing and retrieving path names in python . All of these functions accept either only bytes or only string objects as their parameters. The result is an object of the same type, if a path or file name is returned. As there are different versions of operating system so there are several versions of this module in the standard library. The os. path module provides functions for returning the absolute path of a relative path and for checking whether a given path is an absolute path. Calling os. path.

CHAPTER 5

RESULTS AND DISCUSSION

As a result of this download management of multimedia file, the download manager acts as a bridge between video, audio or text file and the location into which the multimedia files have to be downloaded. So whenever you want to download any text file or audio file or any video file from any application you just need to copy the url of that respective file and paste it in the download manager and then you need to select location into which you want to download the respective file.

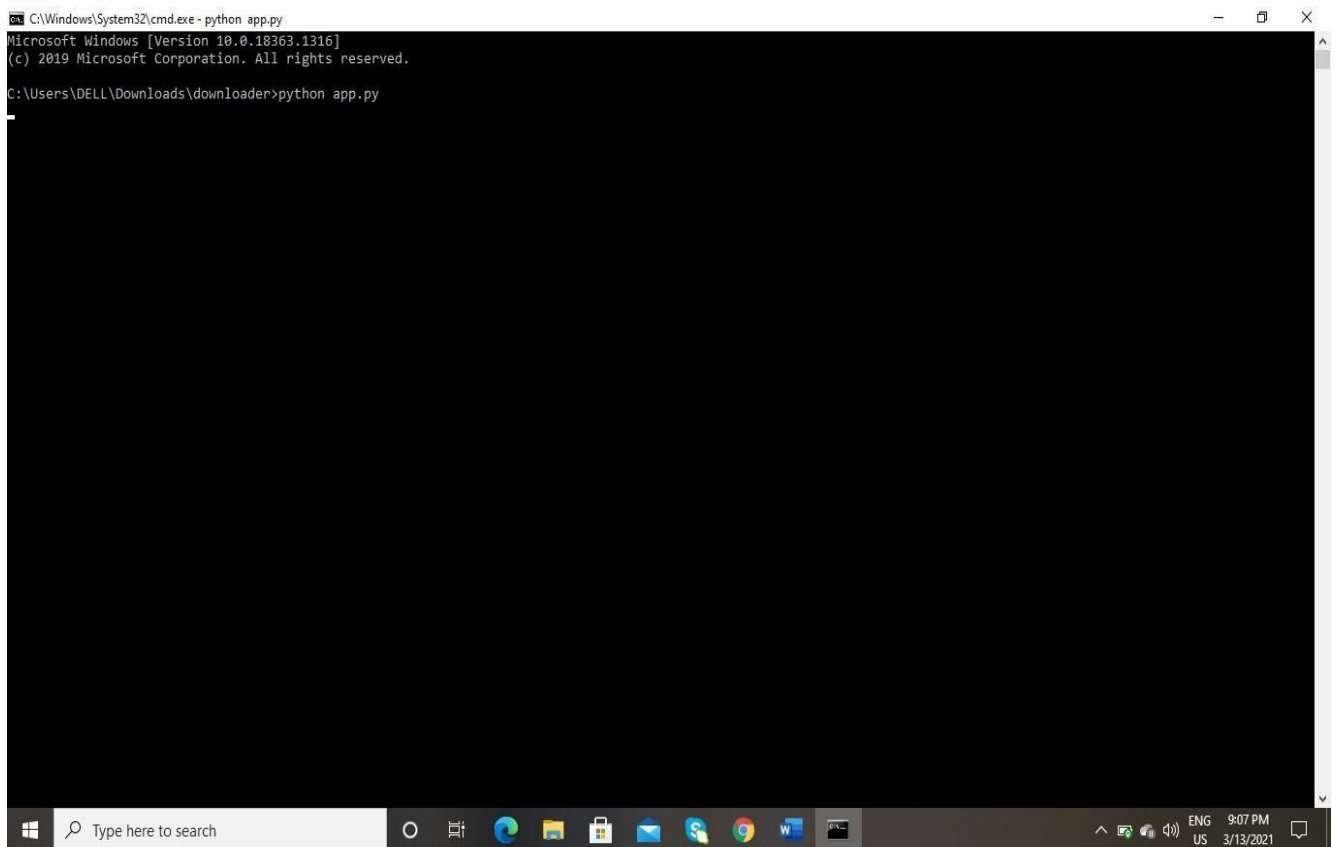


Fig 5.1 Command Prompt

The Fig 5.1 is the initial stage of the project. To run the code first we need to open the command prompt and then we should set the path to the drive consisting the code file. Then we should give the command as `python filename.py`. Here we saved the file as `app` so we gave the command as `python app.py` in the cmd.

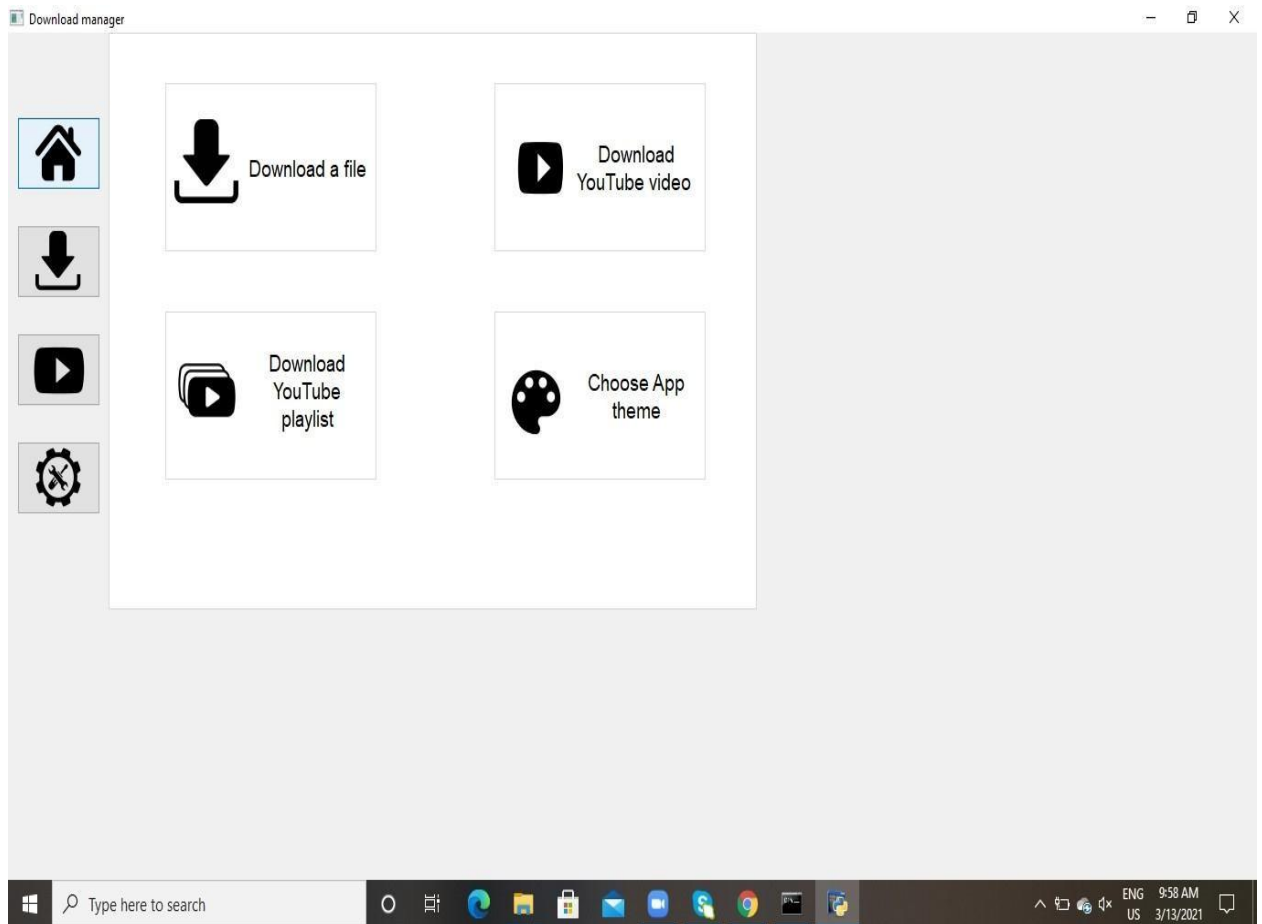


Fig 5.2 Home Page

The Fig 5.2 is the second step in our project. As soon as you give the command in cmd the code gets executed and the home page will be opened as shown in the above figure. There will be a Home icon on the left side of the download manager apk and all the available options will be displayed on the home page along with their icons and names. Here we gave four options one is download a file, next one is download youtube video, download youtube playlist and choose the app theme. You can choose whatever option you want by clicking on the respective icon. If you want to download a text file then you should click on download a file option. If you want to download a youtube video then you need to click on download youtube video option. If you want to download a playlist you should click on download youtube playlist option. If you want to change the theme of the interface click on choose app theme option.

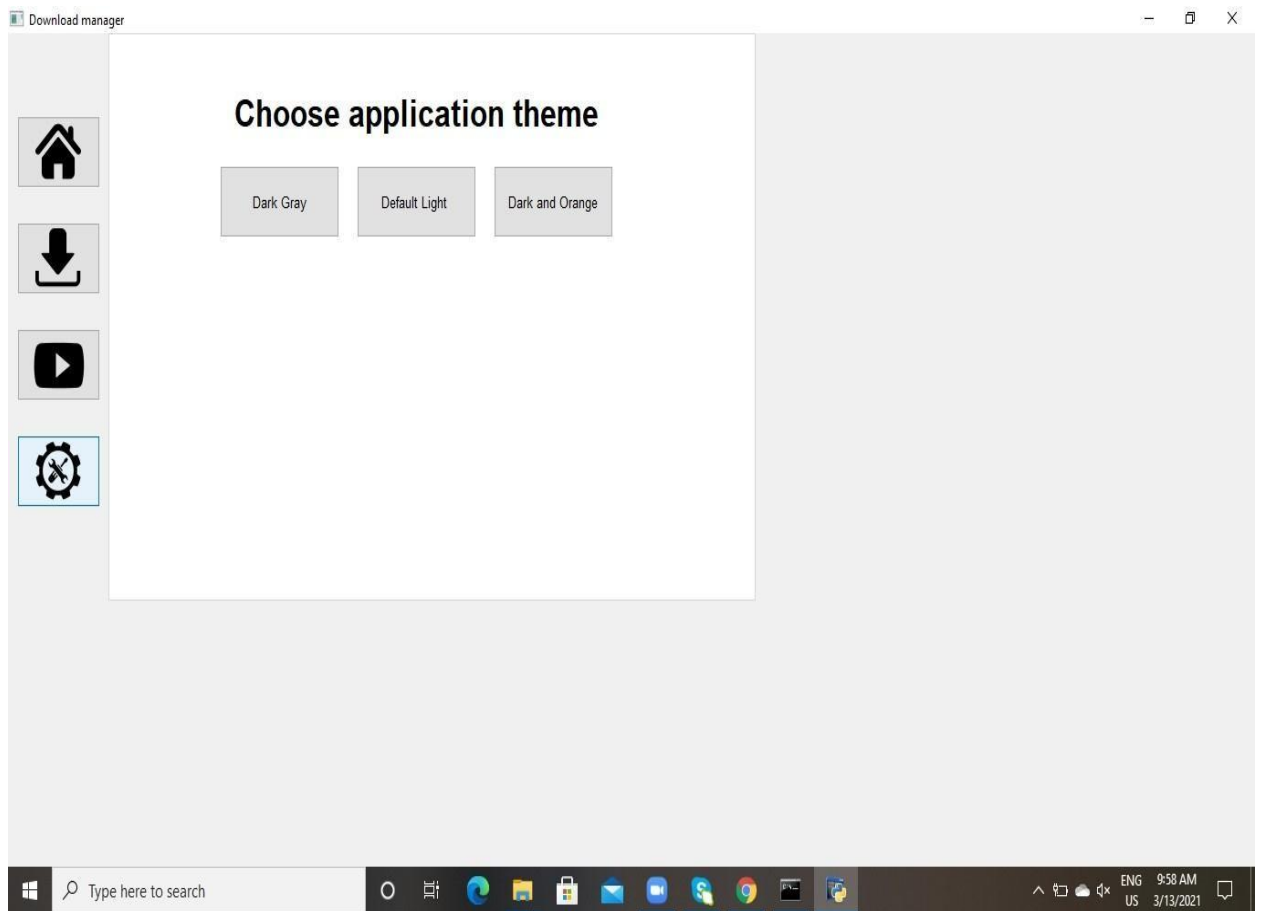


Fig 5.3 Choose App Theme

The Fig 5.3 describes how to choose the application theme in our project. First we should click on the settings icon which is displayed in the bottom of left side of the application. As soon as you click on the settings icon the interface will be opened as shown in the above figure. From the available options displayed on the application we should select the theme which we want to apply for our application. We gave three themes to make our interface more attractive. First one is Dark Grey , second is Dark Light and the third one is Dark and Orange. You can select any one of these three themes so that our application becomes more attractive.

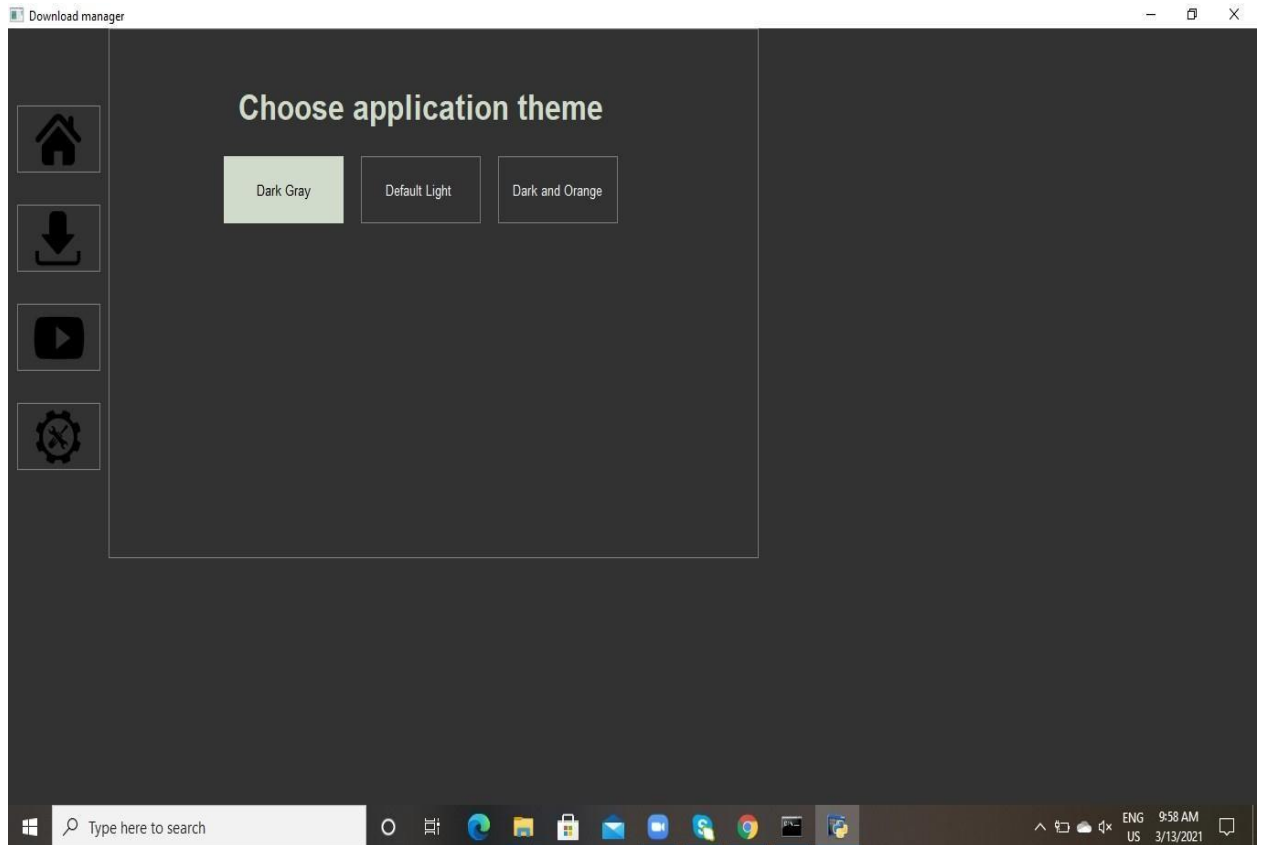


Fig 5.4 Dark Theme

The Fig 5.4 describes how to select Dark Gray theme for our project. . As soon as you click on the settings icon the interface will be opened as shown in the above figure. From the available options displayed on the application we should select the theme which we want to apply for our application. We gave three themes to make our interface more attractive. First one is Dark Grey , second is Dark Light and the third one is Dark and Orange. Now click on the Dark Gray option in the choose application theme interface. As soon as we click on the dark gray option the application turns into dark colour and makes the interface attractive.

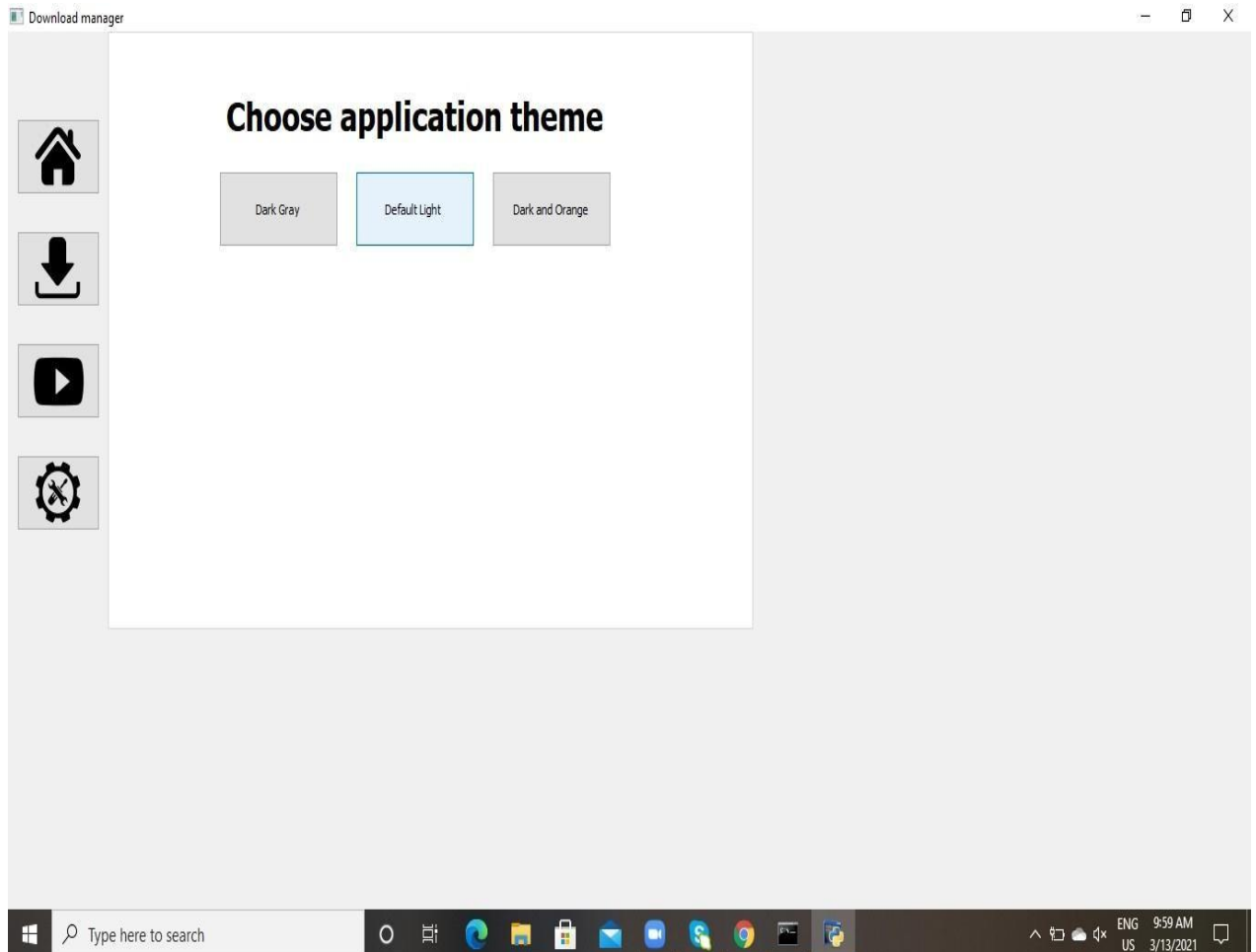


Fig 5.5 Default Light Theme

The Fig 5.5 describes how to select Default Light theme for our project. As soon as you click on the settings icon the interface will be opened as shown in the above figure. From the available options displayed on the application we should select the theme which we want to apply for our application. We gave three themes to make our interface more attractive. First one is Dark Grey, second is Dark Light and the third one is Dark and Orange. Now click on the Default Light option in the choose application theme interface. As soon as we click on the default light option the application turns into white colour and makes the application attractive.

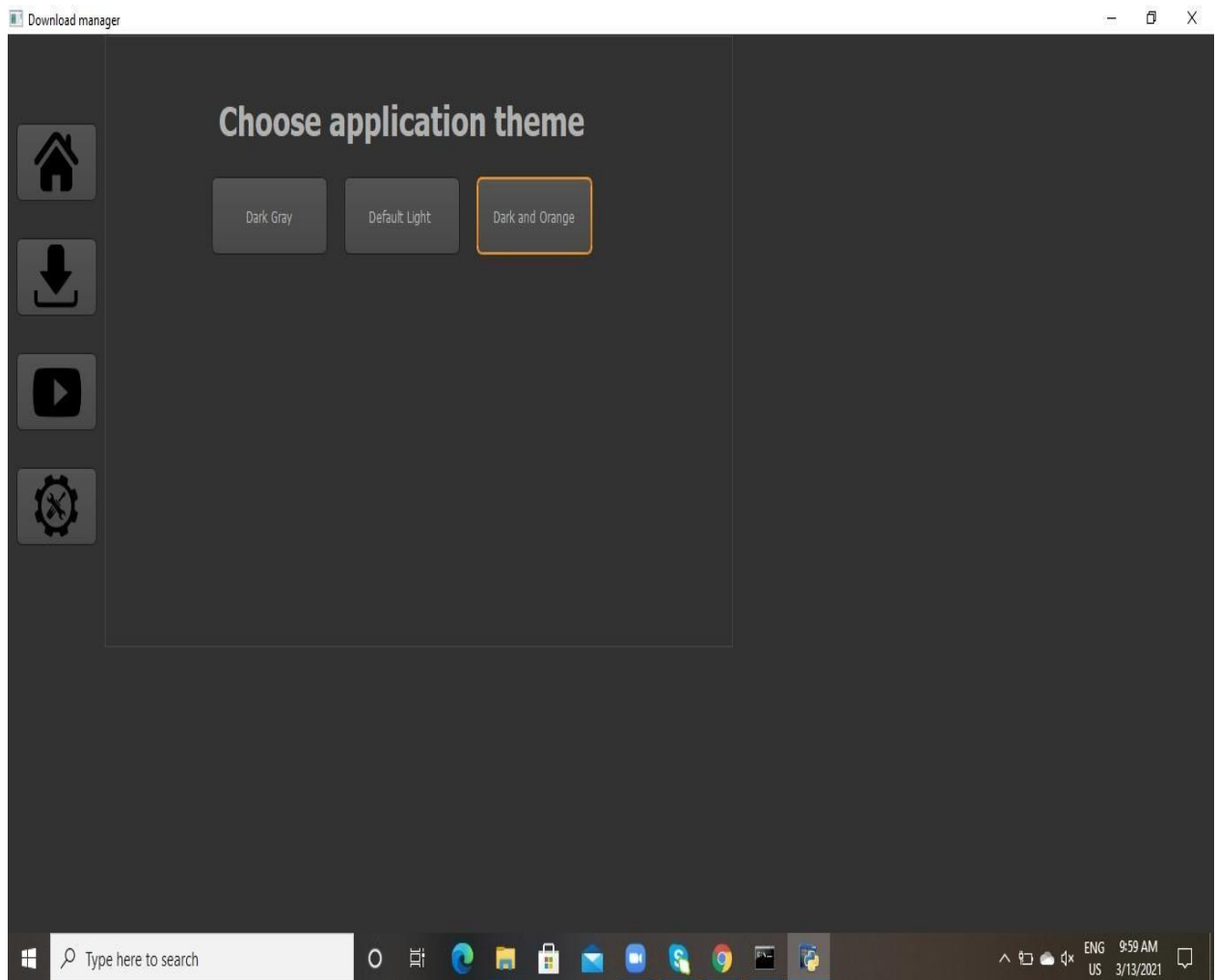


Fig 5.6 Dark Orange Theme

The Fig 5.6 describes how to select Dark And Orange theme for our project. . As soon as you click on the settings icon the interface will be opened as shown in the above figure. From the available options displayed on the application we should select the theme which we want to apply for our application. We gave three themes to make our interface more attractive. First one is Dark Grey , second is Dark Light and the third one is Dark and Orange. Now click on the Dark And Orange option in the choose application theme interface. As soon as we click on the dark and orange option the application turns into dark colour and border is shaded with orange colour and makes the application attractive.

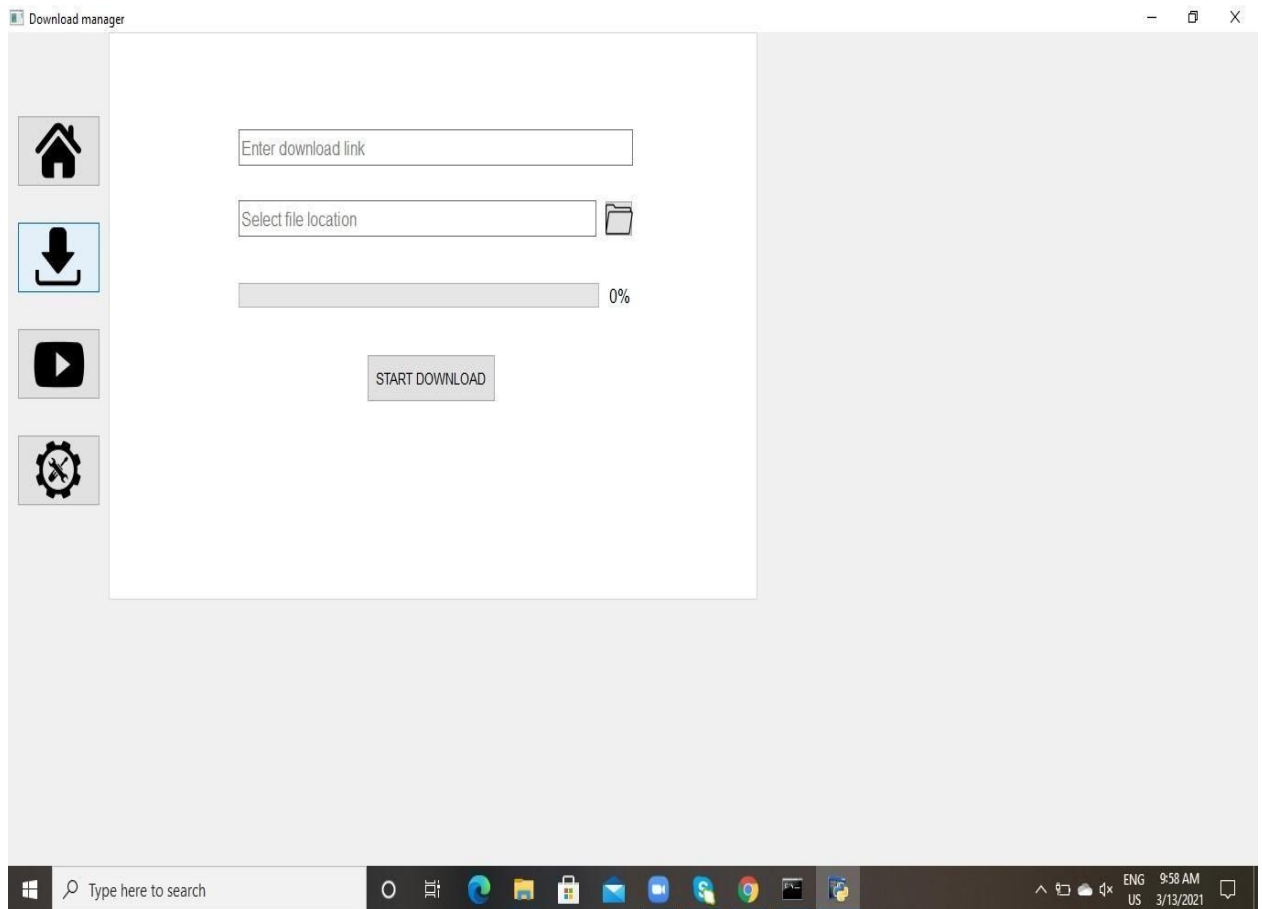


Fig 5.7 Downloading a File

The Fig 5.7 describes how to download a text file using the URL link. There will be a Home icon on the left side of the download manager apk when you click on that all the available options will be displayed on the home page along with their icons and names. Here we gave four options one is download a file, next one is download youtube video, download youtube playlist and choose the app theme. You can choose whatever option you want by clicking on the respective icon. If you want to download a text file then you should click on download a file option. Then the interface will appear as shown in the above figure. Here in the space given for enter download link you should copy the url link of the file which you want to download and paste it there. After that select the location into which you want to download the file and then click on start download option.

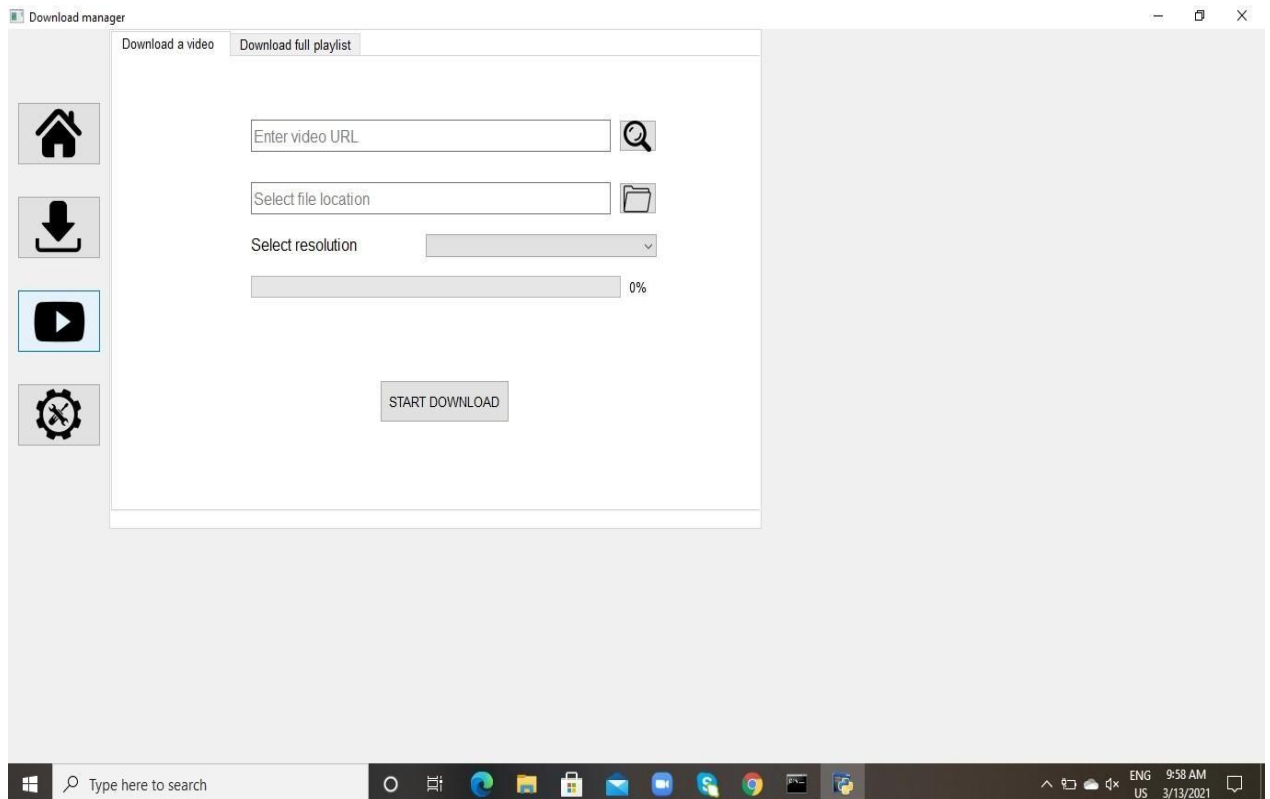


Fig 5.8 Download Youtube Video

The Fig 5.8 describes how to download a youtube video using the URL link. There will be a Home icon on the left side of the download manager apk when you click on that all the available options will be displayed on the home page along with their icons and names. Here we gave four options one is download a file, next one is download youtube video, download youtube playlist and choose the app theme. You can choose whatever option you want by clicking on the respective icon. If you want to download a youtube video then you need to click on download youtube video option. Then the interface will appear as shown in the above figure. Here in the space given for enter download link you should copy the url link of the youtube video which you want to download and paste it there. After that select the location into which you want to download the video and then click on start download option.

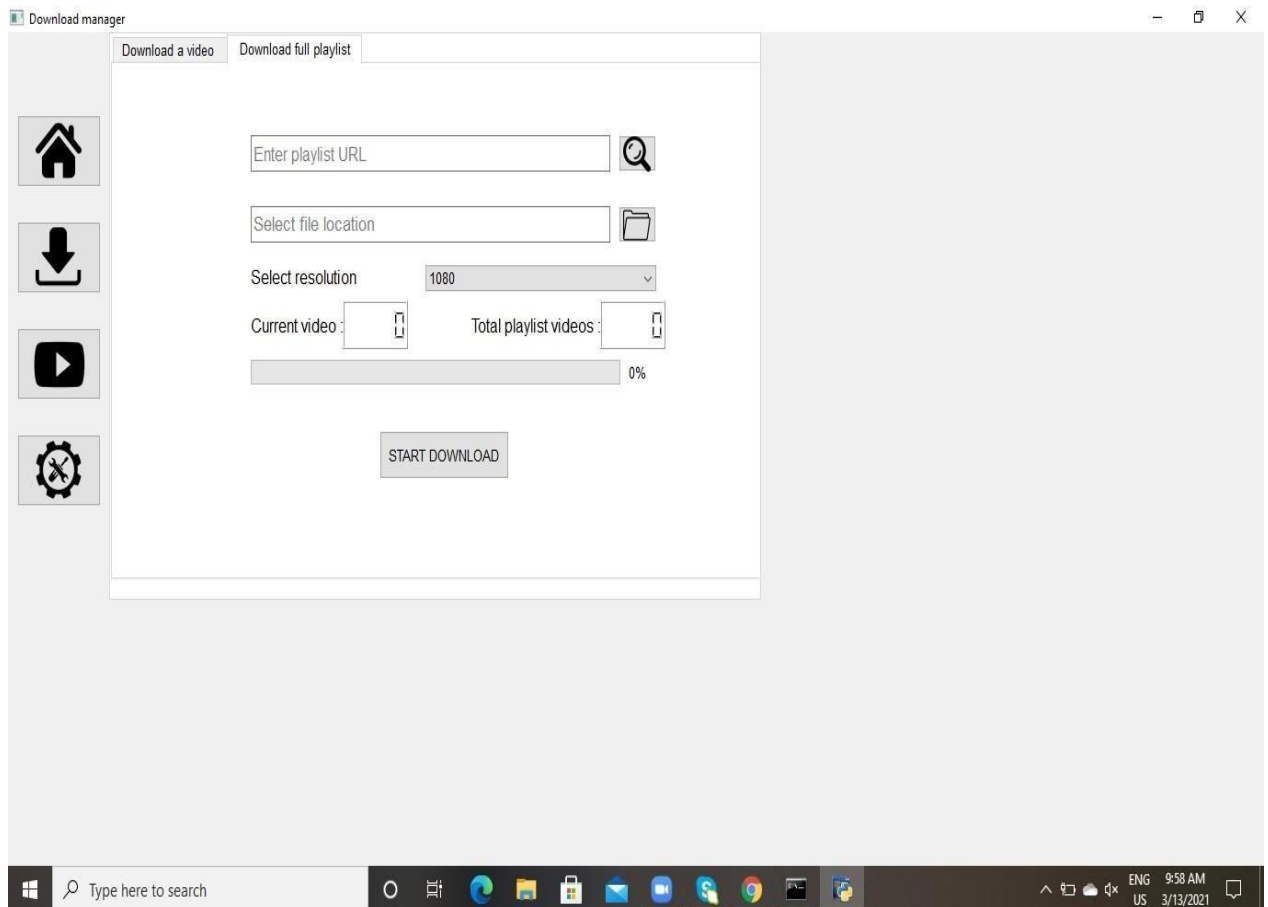


Fig 5.9 Download Youtube Playlist

The Fig 5.9 describes how to download a youtube playlist using the URL link. There will be a Home icon on the left side of the download manager apk when you click on that all the available options will be displayed on the home page along with their icons and names. Here we gave four options one is download a file, next one is download youtube video, download youtube playlist and choose the app theme. You can choose whatever option you want by clicking on the respective icon. If you want to download a youtube playlist then you need to click on download youtube playlist option. Then the interface will appear as shown in the above figure. Here in the space given for enter download link you should copy the url link of the youtube playlist which you want to download and paste it there. After that select the location into which you want to download the playlist and then click on start download option.

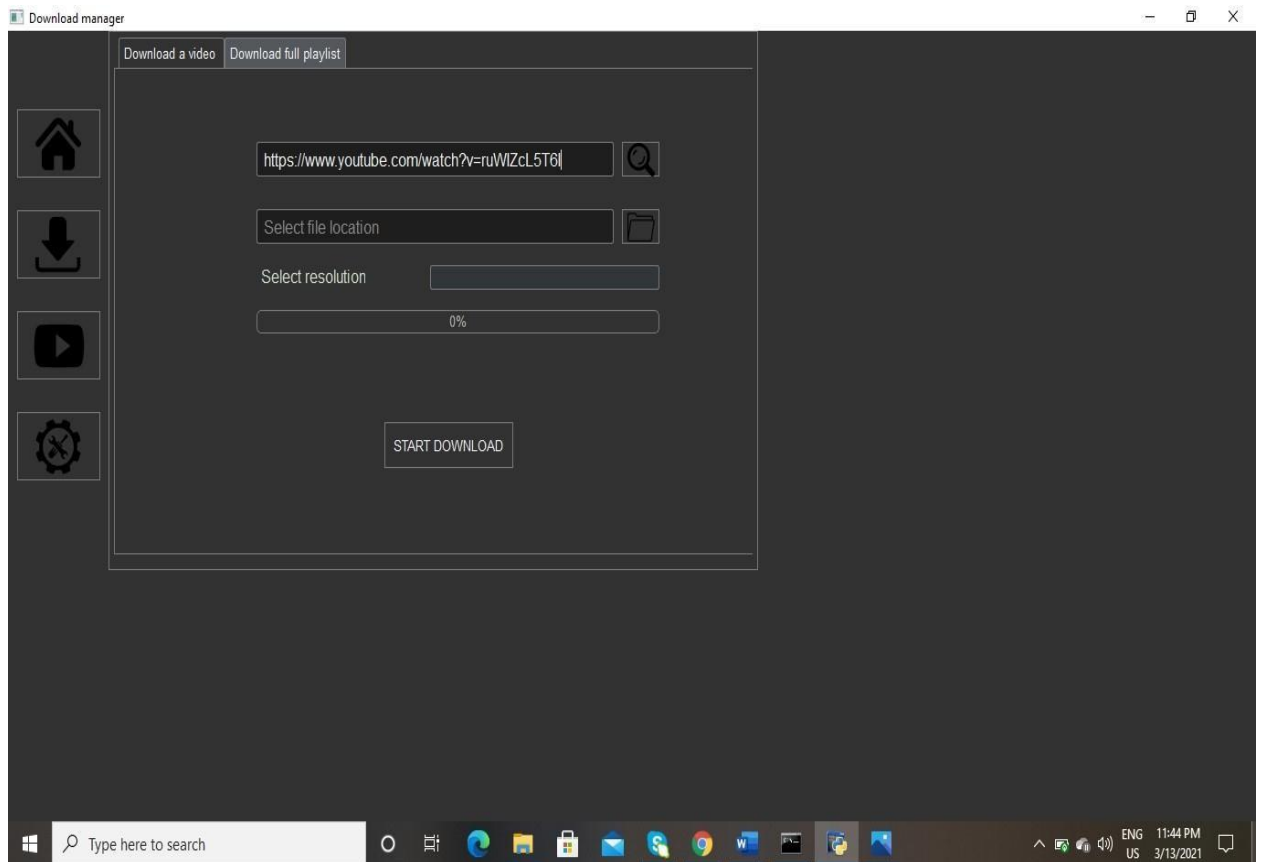


Fig 5.10 Downloading a Video

The Fig 5.10 describes how to download a video using this download manager. There will be a Home icon on the left side of the download manager apk when you click on that all the available options will be displayed on the home page along with their icons and names. Here we gave four options one is download a file, next one is download youtube video, download youtube playlist and choose the app theme. You can choose whatever option you want by clicking on the respective icon. If you want to download a youtube video then you need to click on download youtube video option. Then the interface will appear as shown in the above figure. Now go to youtube and click on the video you want to download. Then select the url of that video and paste it in the enter download link spacebar as shown in the above figure.

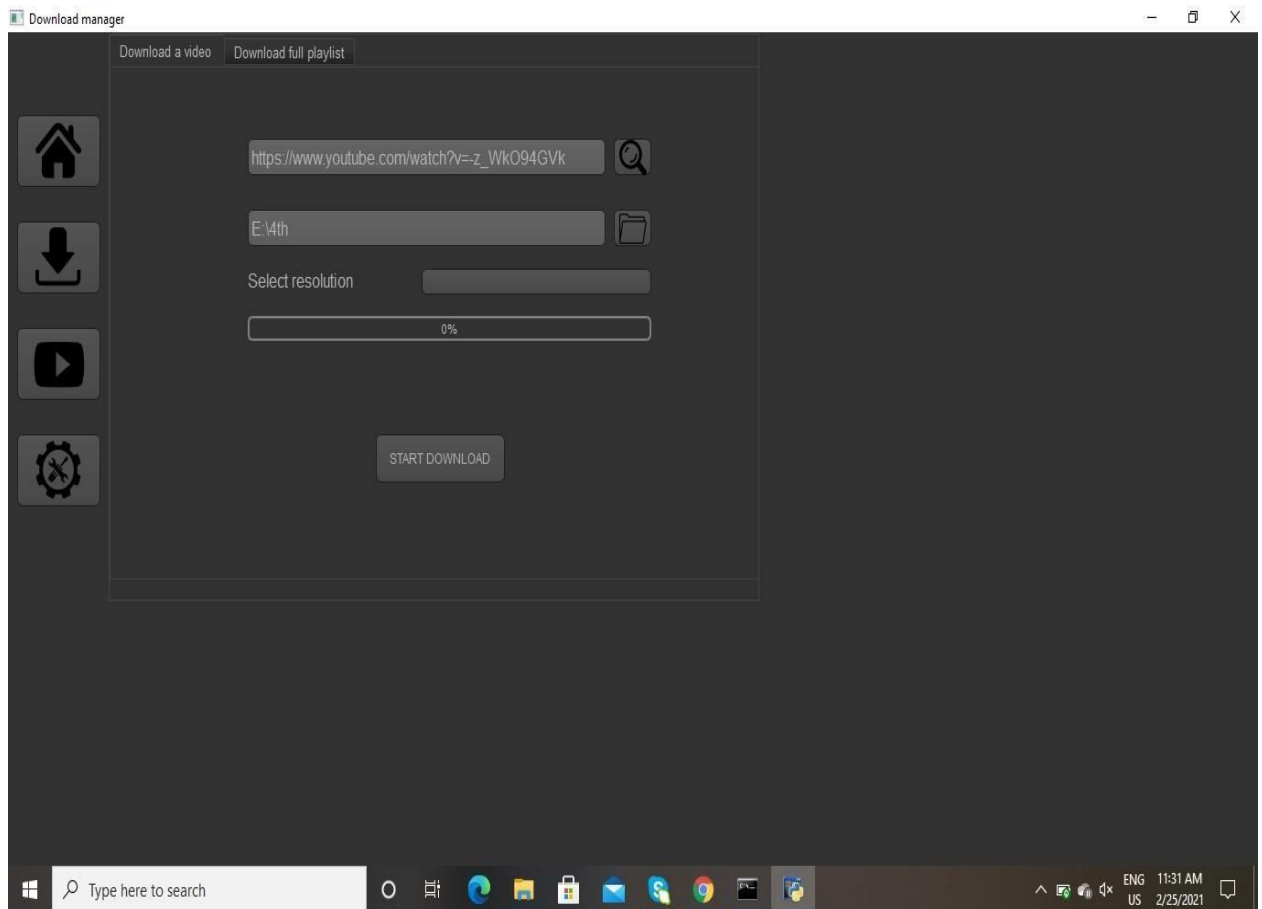


Fig 5.11 Setting Location To Download

The Fig 5.11 describes how to set the location to download a video using this download manager. There will be a Home icon on the left side of the download manager apk when you click on that all the available options will be displayed on the home page along with their icons and names. Here we gave four options one is download a file, next one is download youtube video, download youtube playlist and choose the app theme. You can choose whatever option you want by clicking on the respective icon. If you want to download a youtube video then you need to click on download youtube video option. Then the interface will appear as shown in the above figure. Now go to youtube and click on the video you want to download. Then select the url of that video and paste it in the enter download link spacebar as shown in the above figure. Now click on the select location menubar and select the location into which you want to download the video as shown in the figure.

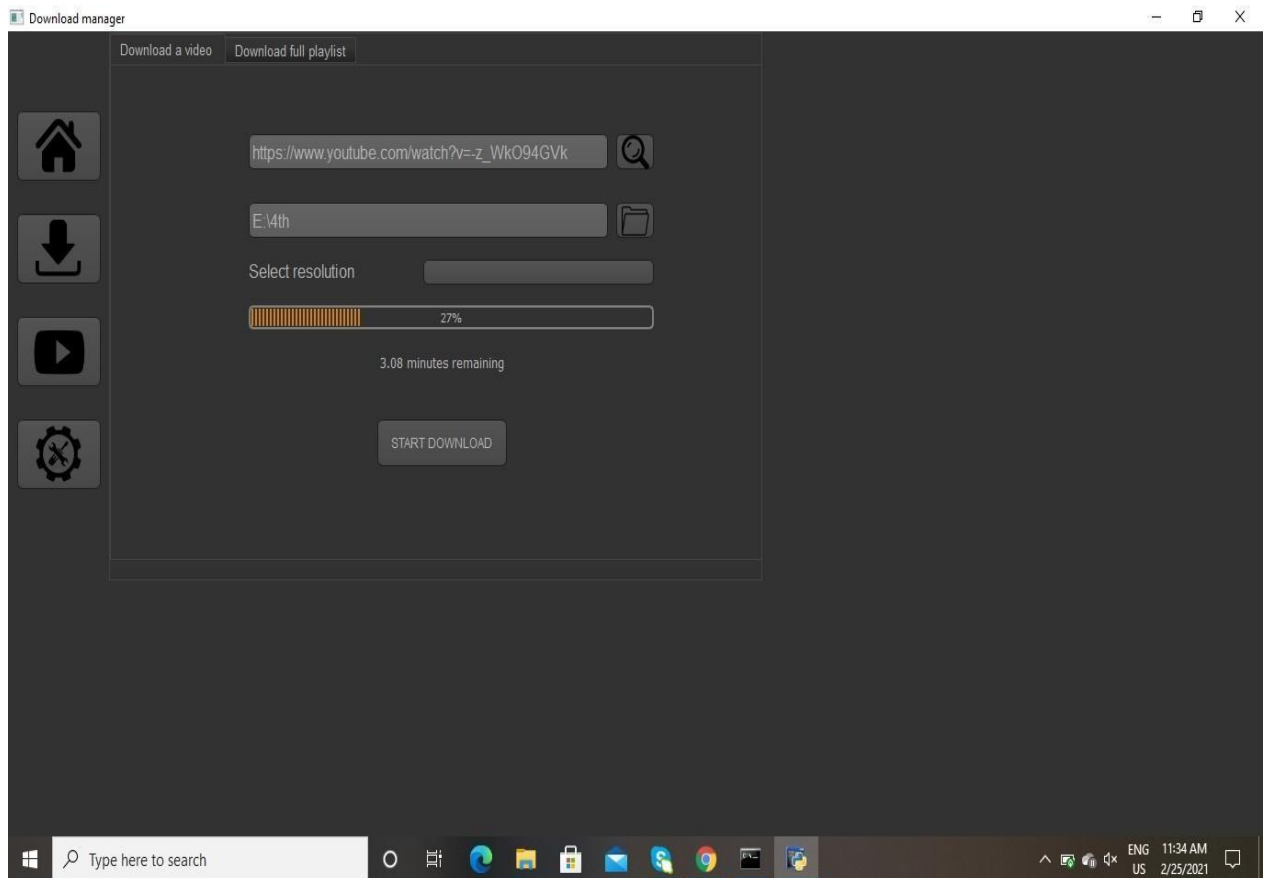


Fig 5.12 Percentage Of Video Downloaded

The Fig 5.12 describes how much percent of video is downloaded. There will be a Home icon on the left side of the download manager apk when you click on that all the available options will be displayed on the home page along with their icons and names. Here we gave four options one is download a file, next one is download youtube video, download youtube playlist and choose the app theme. You can choose whatever option you want by clicking on the respective icon. If you want to download a youtube video then you need to click on download youtube video option. Then the interface will appear as shown in the above figure. Now go to youtube and click on the video you want to download. Then select the url of that video and paste it in the enter download link spacebar as shown in the above figure. Now click on the select location menubar and select the location into which you want to download the video as shown in the figure. Now click on start download option. As soon as you click start download the video gets downloaded and percentage of video getting downloaded will be updated for every second as shown in the above figure.

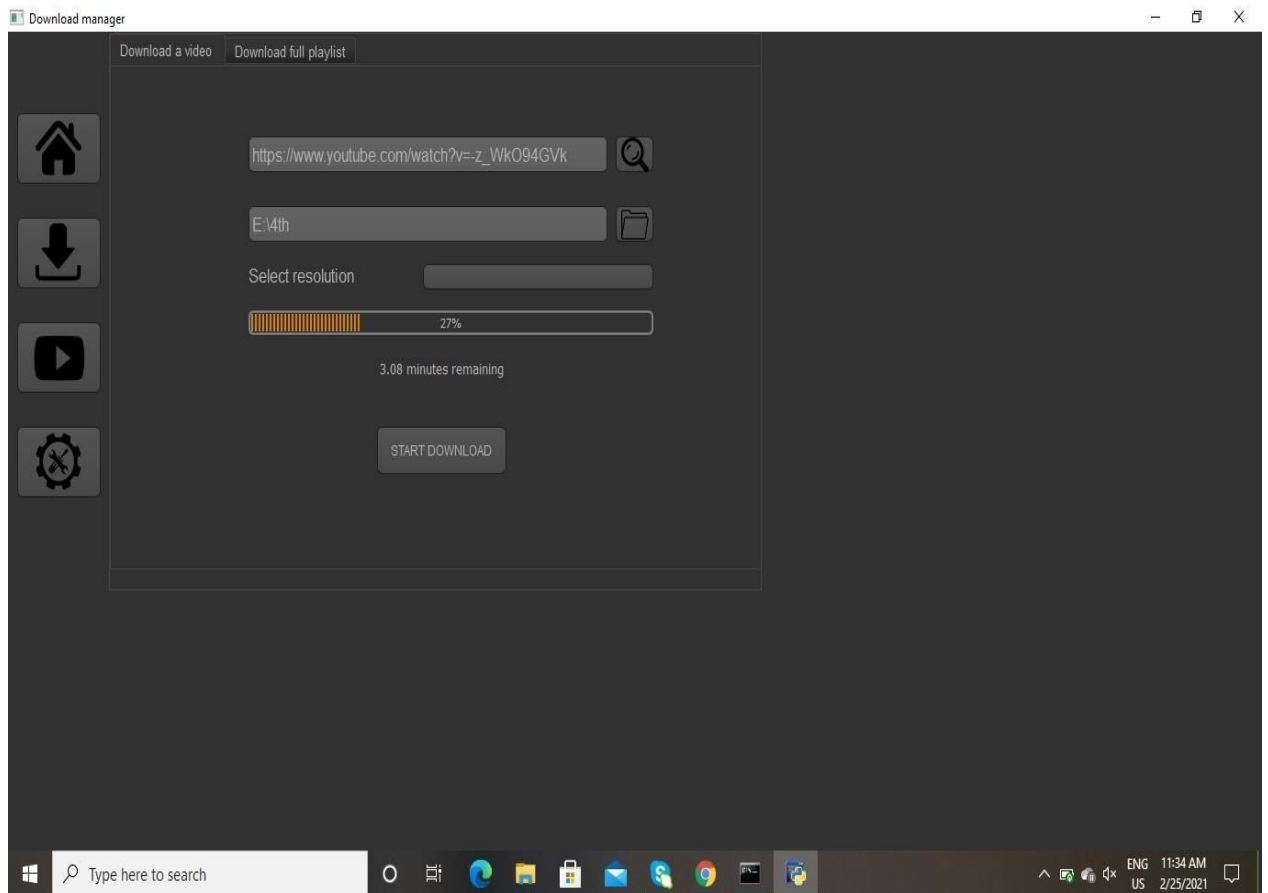


Fig 5.13 Time Remaining to Download the Video

The Fig 5.13 describes how much time is remaining to complete the download of a video. There will be a Home icon on the left side of the download manager apk when you click on that all the available options will be displayed on the home page along with their icons and names. Here we gave four options one is download a file, next one is download youtube video, download youtube playlist and choose the app theme. You can choose whatever option you want by clicking on the respective icon. If you want to download a youtube video then you need to click on download youtube video option. Then the interface will appear as shown in the above figure. Now go to youtube and click on the video you want to download. Then select the url of that video and paste it in the enter download link spacebar as shown in the above figure. Now click on the select location menubar and select the location into which you want to download the video as shown in the figure. Now click on start download button. As soon as you click start download the video will start downloading and the time remaining to download the full video will be displayed on the application as shown in figure.

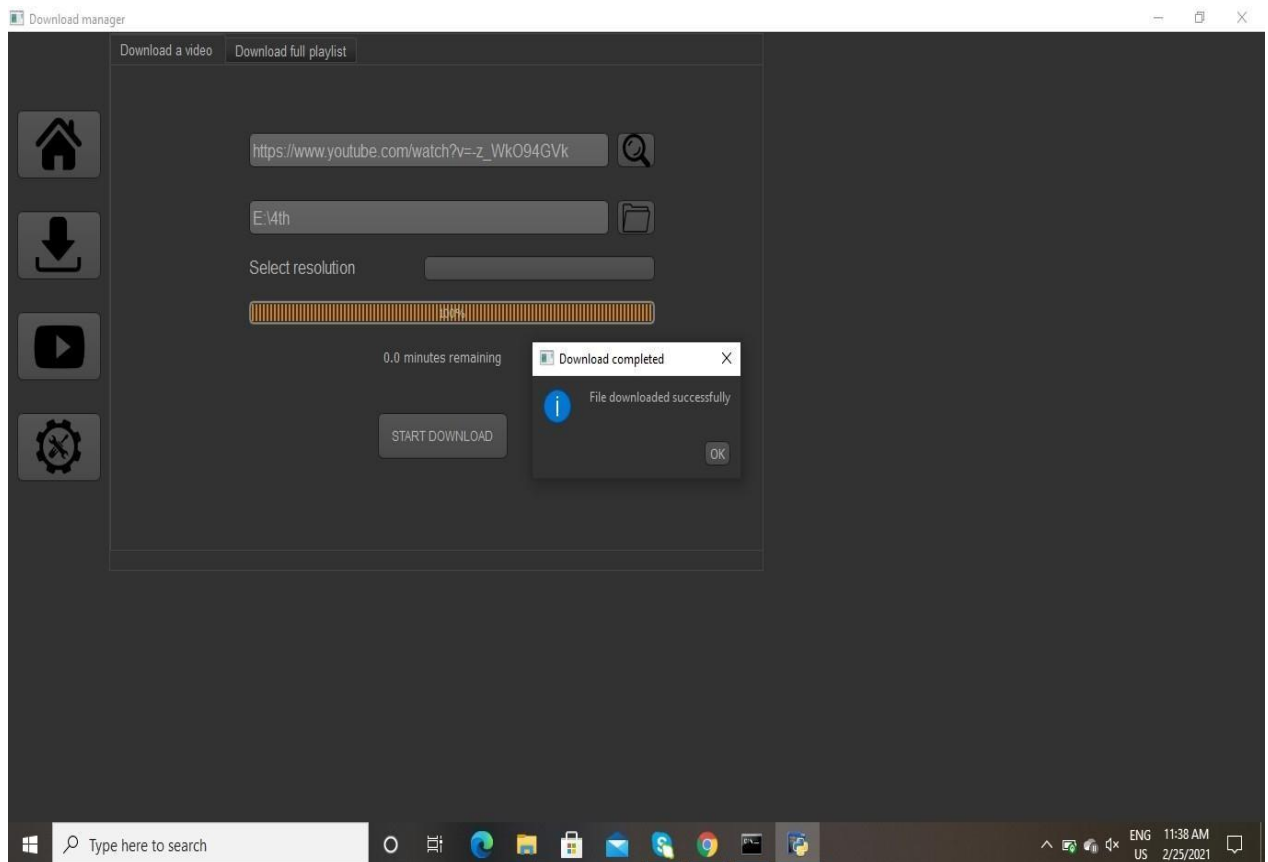


Fig 5.14 Download Completed

The Fig 5.14 shows that the download of a video is completed. There will be a Home icon on the left side of the download manager apk when you click on that all the available options will be displayed on the home page along with their icons and names. Here we gave four options one is download a file, next one is download youtube video, download youtube playlist and choose the app theme. You can choose whatever option you want by clicking on the respective icon. If you want to download a youtube video then you need to click on download youtube video option. Then the interface will appear as shown in the above figure. Now go to youtube and click on the video you want to download. Then select the url of that video and paste it in the enter download link spacebar as shown in the above figure. Now click on the select location menubar and select the location into which you want to download the video as shown in the figure. Now click on start download button. As soon as you click on start download the video starts downloading with the percentage and time remaining to download the video. Once the video is downloaded it will notify that Download Completed as shown in the figure.

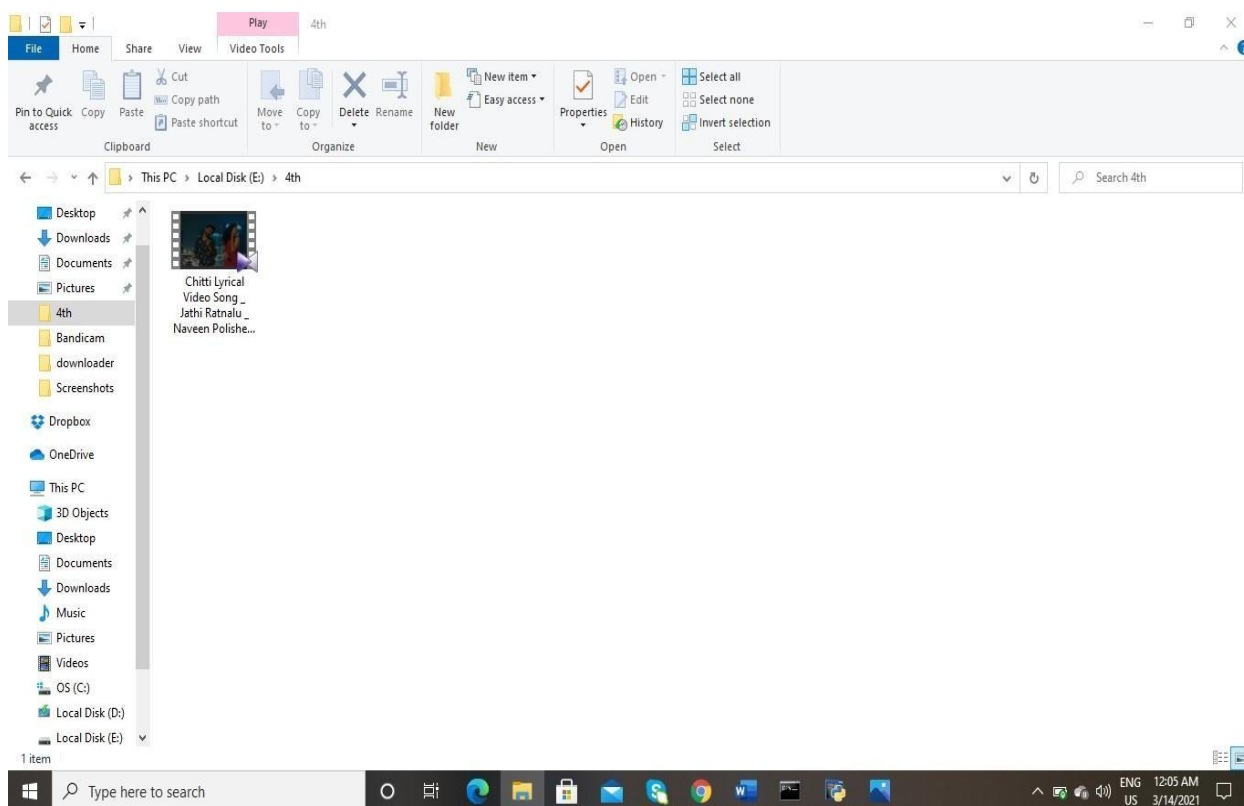


Fig 5.15 Downloaded Video

The Fig 5.15 describes that the selected video is downloaded into selected location. There will be a Home icon on the left side of the download manager apk when you click on that all the available options will be displayed on the home page along with their icons and names. Here we gave four options one is download a file, next one is download youtube video, download youtube playlist and choose the app theme. You can choose whatever option you want by clicking on the respective icon. If you want to download a youtube video then you need to click on download youtube video option. Then the interface will appear as shown in the above figure. Here in the space given for enter download link you should copy the url link of the youtube video which you want to download and paste it there. After that select the location into which you want to download the video and then click on start download option. As soon as the download is completed go to the location which you selected and check whether the selected video is downloaded or not as shown in the figure.

CHAPTER 6

CONCLUSION AND FUTURE WORK

CONCLUSION

These downloaded exercises are gathered in a chain of importance under a root tree. apparatus to speed up by up to multiple times, resume and timetable downloads. Extensive blunder recuperation and resume ability will restart broken or intruded on downloads because of lost associations, network issues, PC closures, or sudden blackouts. Basic realistic UI makes IDM easy to understand and simple to utilize. Web Download Manager has a savvy download rationale quickening agent that highlights smart unique record division and safe multipart downloading innovation to quicken your downloads. Not at all like other download managers and quickening agents Internet Download Manager sections downloaded documents progressively during download measure and reuses accessible associations without extra interface and login stages to accomplish best speeding up execution. This design can be seen both in Windows library and in registry structure. Proposed framework can likewise be intended to gather the impressions of IDM exercises with single tick. Another valuable angle discovered during the exploration is that date and time are en-clair, not encoded utilizing little-endian or large endian design, which saves the examination time and quicken the legal antique social occasion measure. This product is valuable for downloading the documents from the web. The expense of the product is low. There it is effectively accessible for all clients. Download administrators ordinarily incorporate at least one of the accompanying highlights, resuming broken or stopped downloads, Downloading documents on helpless associations, Automatic recursive downloads, Pausing the downloading of enormous records, Scheduled downloads.

Future Work

Our software is based on completely the python language to provide better experience and easy understanding in a graphical manner. This software is useful for downloading the multimedia files from the internet. The cost of the software is very low. There it is easily available for all the customers. Download managers include many features like the download can be paused, resume, stop . Due to poor network connection if the download is stopped in the middle it wont start the

download again while it resumes from where it stopped as soon as the internet is connected. So one can make use of this software and download multimedia files with much accuracy and speed. This software is useful for downloading the multimedia files like music, videos, photos, documents etc. from the internet. The cost of the software is very cheap. Download managers commonly include one or more of the following features:

- Resuming broken or paused downloads.
- Downloading files on poor connections.
- Automatic recursive downloads.
- Pausing the downloading of large files.
- Scheduled downloads.
- Variable bandwidth usage.

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APPENDIX

A. PLAGIARISM REPORT



Plagiarism Checker X Originality Report

Similarity Found: 2%

Date: Thursday, February 25, 2021

Statistics: 33 words Plagiarized / 1938 Total words

Remarks: Low Plagiarism Detected - Your Document needs Optional Improvement.

DOWNLOAD MANAGEMENT OF MULTIMEDIA FILES SAI VENKATA REDDY P [1] ,
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Science and Technology, Chennai, India [3]Associate professor, Dept. of CSE,
Sathyabama Institute of Science and Technology, Chennai, India ABSTRACT: Download
Manager gives quickened download speed and adaptability in highlights. Its engaging
quality lies behind video content preparing and programmed treatment of downloads.
This paper investigations Download Manager exercises recorded across different
documents that incorporates Windows Registry, history and log records from antiques
assortment see point.

In the event of download directors, the first concerns are establishment area, download
way, downloaded document, URL address, login qualifications for secret key secured
sites, date and time the action was performed. It downloads general records and
recordings from YouTube and huge loads of other streaming sites, and it will continue
uncompleted downloads, download whole video playlist or chose recordings.

KEYWORDS: Download Manager, Files, Videos, browser.

B. JOURNAL PAPER

DOWNLOAD MANAGEMENT OF MULTIMEDIA FILES

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ABSTRACT: *Download Manager gives quickened download speed and adaptability in highlights. Its engaging quality lies behind video content preparing and programmed treatment of downloads. This paper investigations Download Manager exercises recorded across different documents that incorporates Windows Registry, history and log records from antiques assortment see point. In the event of download directors, the first concerns are establishment area, download way, downloaded document, URL address, login qualifications for secret key secured sites, date and time the action was performed. It downloads general records and recordings from YouTube and huge loads of other streaming sites, and it will continue uncompleted downloads, download whole video playlist or chose recordings.*

KEYWORDS: *Download Manager, Files, Videos, Browser*

I INTRODUCTION

A download manager is a PC program devoted to the undertaking of downloading perhaps random independent records from the Internet for capacity. This is not normal for a World Wide Web program, which is chiefly proposed to peruse website pages, made out of a large number of more modest records, where mistake free moving of documents for perpetual capacity is of auxiliary significance. (A fizzled or inadequate website page document once in a while ruins the page.) The run of the mill download director at any rate gives intends to recuperate from mistakes without losing the work previously finished, and can alternatively part the record to be downloaded into at least 2 sections, which are then moved in equal, possibly making the cycle quicker inside the restrictions of the accessible data transmission. (A couple of workers are known to hinder moving documents in equal sections, on the rule that worker limit ought to be shared similarly by all clients. Multi-source is the name given to documents that are downloaded in equal Download chiefs are valuable for dynamic Internet clients. For dial-up clients, they can consequently dial the Internet Service Provider around evening time, when rates or taxes are typically much lower, download the predetermined records, and hang-up. They can record which interfaces the client taps on during the day, and line these documents for later download. For broadband clients, download managers can help download exceptionally enormous documents by continuing broken downloads, by restricting the data transfer capacity utilized, so other web exercises are not influenced (eased back) and the worker isn't over-burden, or via consequently exploring a website and downloading pre-determined substance (photograph exhibitions, MP3 assortments, and so on) this can likewise incorporate naturally downloading entire locales and routinely refreshing them.

Many download administrators uphold Meta connect, a XML document posting mirrors, checksums, and other data valuable for downloading of the download chief is a PC program committed to the undertaking of downloading potentially disconnected independent records from the Internet for capacity. This is not normal for a World Wide Web program, which is basically planned to peruse pages, made out of a huge number of more modest records, where blunder free moving of documents for lasting stockpiling is of auxiliary significance. It is a product that causes you to focus on your downloads, quicker download speeds, programmed antivirus checking, uphold for stopping and continuing downloads, and furthermore offers worked in scheduler. This product might be incorporated into an internet browser or as an independent director.

The assessment did in this paper emphasizes the impressions of IDM. The exploration is refined on IDM forms 5.16 and 5.18 running on Microsoft Windows XP stage. The experiments are completed at numerous machines to get better outcomes. The measurable analyzation describes the data about client (Installer of IDM), downloaded records (total or inadequate) history, login accreditations (secret key ensured

sites/workers and FTP/HTTP intermediary workers), impeded sites/workers, URL locations and search watchwords history. Also, it gives exact detail of secret word encryption/encoding method utilized by IDM to get the client login qualifications. The investigation covers windows library assessment, History and log documents examination to assemble the rich confirmations from the proposed framework.

II RELATED WORK

IDM sorts out downloaded records by their document types in a few default and client made classes. The default classifications for downloading records are Music, Compressed Documents, Video and Programs. In 'Hacking Tools', name of client made class. It has prominent and basic data about the client interests and download exercises for an agent while reviewing questionable framework. Windows library oversees class settings inside sub-keys under 'FoldersTree'. 1. It is involved classification name as the title of sub-key, upheld expansions, interesting Identity and download index way. Each download document contains a key worth 'categoryID' which addresses the special ID of classification. Exceptional ID can be acquainted with relate the class of each downloaded document. Table 1 on next page depicts the relating ID's of classes. It merits referencing that the client made classification extraordinary ID begins from 64 forward. Windows Registry keeps data pretty much completely downloaded documents.

It keeps up each downloaded document as sub-key of 'Download Manager'. Each downloaded document is addressed with a File ID for example '6'. The succession of File ID begins from three instead of one. The worth '6' addresses that client has downloaded forward document. The File ID is increased with esteem one for each new document. The priceless and fundamental key estimations of downloaded records are document name, document size, date of adding a URL address to IDM for downloading a document, URL address, login qualifications, download index way, Category ID and status of document. Naturally IDM utilizes 'mysterious' as username and 'IEUser' as secret key for client that doesn't give login certifications.

III EXISTING SYSTEM

In the depiction given underneath we have discussed the framework utilized by the different Organization and Institutes for talking. We are depicting the nature, reason and constraint of their current framework, and how we have dealt with improve the usefulness of their framework in the new framework. Existing framework can possibly work, if web office is given, which bring about significant expense. Individual not having a place with the association can likewise meddle and can attempt to break the security of the authoritative information. In the framework utilized by the different Organization's and foundations, correspondence is by and large being held every now and again. The organizations utilized phones, fax and email frameworks to speak with one another wherein excess of information is ordinary. A great deal of work must be accomplished for each assignment for mailing and fax. Other than this all the administration is likewise troublesome and client needs to rely on the administrations of ISPs for a really long time superfluously. The current framework has a few constraints and downsides so change to a superior and powerful framework

3.1 DISADVANTAGES OF EXISTING SYSTEM

- Low usefulness
- Security issue
- Future improvement is troublesome.
- Incidental

IV PROPOSED SYSTEM

This task chiefly centres around downloading the mixed media records. The log of each downloaded document is kept in a different record. The log records of IDM are adequately distinctive yet passwords are covered with 'xxx'. The inspector can gather downloading start time, URL address used to download a document, download registry way, username, and intermediary worker address. IDM additionally holds the log of all occasions performed during downloading

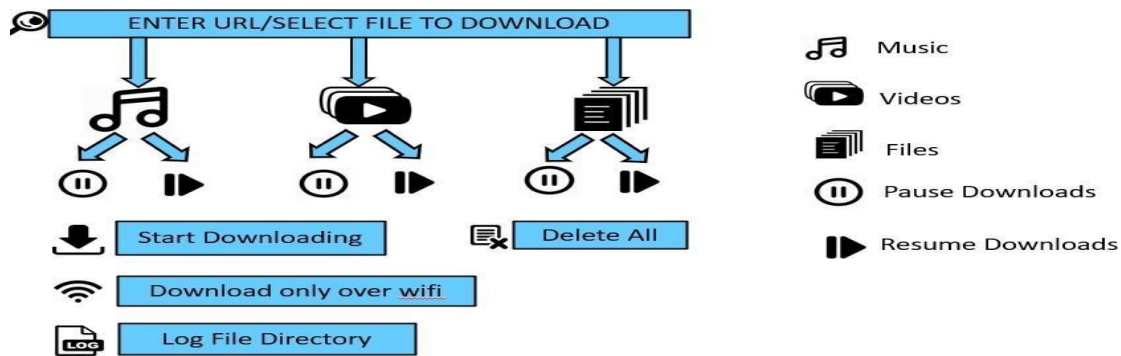


FIG 1 OVERVIEW OF THE PROPOSED SYSTEM

Download Manager can respite or resume our downloads at whatever point required. It can likewise redo our downloads by choosing records we needed or the whole playlist can be downloaded on the double. It additionally helps downloading huge documents over wifi. Pursuing quickest download of mixed media documents with no deficiency of movement of finished undertakings and saving the time utilizing the most recent innovation and basic directions is the fundamental rationale to fabricate this Download Manager.

4.1 PYQT5

PyQt5 is cross-stage GUI toolbox, a bunch of python ties for Qt v5. One can build up an intelligent work area application no sweat due to the devices and straightforwardness given by this library. A GUI application comprises of Front-end and Back-end. PyQt5 has given an apparatus called 'QtDesigner' to plan the front-end by simplified strategy with the goal that improvement can turn out to be quicker and one can give additional time on back-end stuff.

QT WIDGETS

Gadgets are the fundamental structure blocks for graphical UI (GUI) applications worked with Qt. Every GUI segment (e.g., Buttons, marks, content manager) is a gadget that is set some place inside a UI window, or is shown as an autonomous window.

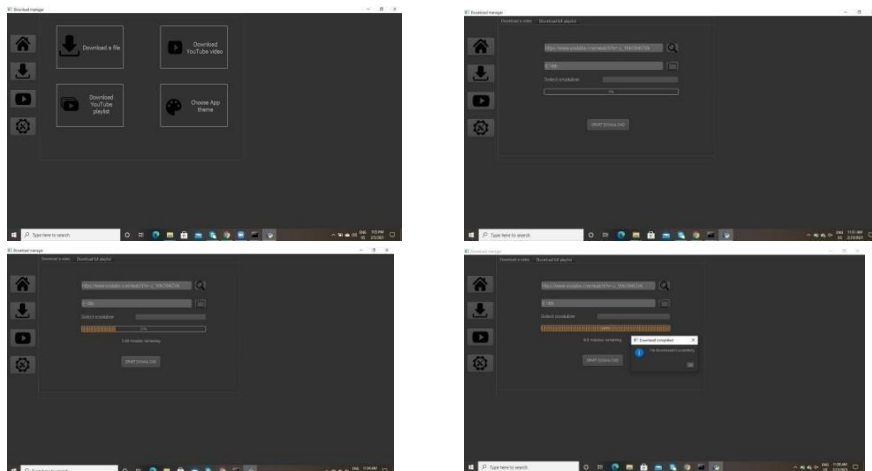
QTCONTEXT

Setting menu in Qt is utilized QMenu class. When performing activities that should cause the menu controller is called, which makes the menu and ties overseers to act in this menu.

QT DESIGNER

Qt Designer is the Qt instrument for planning and building graphical UIs with Qt Widgets. You can make and modify your windows or discoursed in a what-you-see-is-the thing that you-get way, and test them utilizing various styles and goals.

V RESULT AND DISCUSSION



VI CONCLUSION

These downloaded exercises are gathered in a chain of importance under a root tree. apparatus to speed up by up to multiple times, resume and timetable downloads. Extensive blunder recuperation and resume ability will restart broken or intruded on downloads because of lost associations, network issues, PC closures, or sudden blackouts. Basic realistic UI makes IDM easy to understand and simple to utilize. Web Download Manager has a savvy download rationale quickening agent that highlights smart unique record division and safe multipart downloading innovation to quicken your downloads. Not at all like other download managers and quickening agents Internet Download Manager sections downloaded documents progressively during download measure and reuses accessible associations without extra interface and login stages to accomplish best speeding up execution. This design can be seen both in Windows library and in registry structure. Proposed framework can likewise be intended to gather the impressions of IDM exercises with single tick. Another valuable angle discovered during the exploration is that date and time are en-clair, not encoded utilizing little-endian or large endian design, which saves the examination time and quicken the legal antique social occasion measure. This product is valuable for downloading the documents from the web. The expense of the product is low. There it is effectively accessible for all clients. Download administrators ordinarily incorporate at least one of the accompanying highlights, resuming broken or stopped downloads, Downloading documents on helpless associations, Automatic recursive downloads, Pausing the downloading of enormous records, Scheduled downloads.

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B. Source Code

```
from PyQt5.QtGui import *
from PyQt5.QtCore import *
from PyQt5.QtWidgets import *
from PyQt5.uic import loadUiType
import urllib.request
import pafy
import humanize

import sys
import os
import os.path

ui, _ = loadUiType('main.ui')

class MainApp(QMainWindow, ui):
    def __init__(self, parent=None):
        super(MainApp, self).__init__(parent)
        QMainWindow.__init__(self)
        self.setupUi(self)
        self.initUi()
        self.handle_Button()

    def initUi(self):
        self.tabWidget.tabBar().setVisible(False)

    def handle_Button(self):
        self.pushButton.clicked.connect(self.handle_Download)          # Tab1
download Button
        self.pushButton_2.clicked.connect(self.handle_Browse)          # Tab1 file
dialogue button
        self.pushButton_7.clicked.connect(self.get_video_data)
```

```

self.pushButton_8.clicked.connect(self.save_Browse)
self.pushButton_6.clicked.connect(self.download_Video)
self.pushButton_4.clicked.connect(self.playlist_download)
self.pushButton_3.clicked.connect(self.playlist_directory)
self.pushButton_9.clicked.connect(self.Open_home)
self.pushButton_10.clicked.connect(self.Open_Download)
self.pushButton_11.clicked.connect(self.Open_Youtube)
self.pushButton_12.clicked.connect(self.Open_setting)
self.pushButton_13.clicked.connect(self.qdark_style)
self.pushButton_14.clicked.connect(self.qlight_style)
self.pushButton_15.clicked.connect(self.qdarkorange_style)

```

```

def handle_Download(self):
    download_url = self.lineEdit.text()
    file_location = self.lineEdit_2.text()
    # print(download_url, file_location)

    if download_url == " or file_location == ":
        QMessageBox.warning(self, "Error downloading", "Fields can't be
empty ")
    else:
        try:
            urllib.request.urlretrieve(download_url, file_location,
self.handle_Progress)
        except Exception:
            QMessageBox.warning(self, "Error downloading", "Please
provide a valid download URL or file location")

        QMessageBox.information(self, "Download completed", 'File downloaded
successfully')
        self.lineEdit.setText("")
        self.lineEdit_2.setText("")

```

```

self.progressBar.setValue(0)

def handle_Progress(self, blocknum, blocksize, downloadedsize):
    total_data = blocknum * blocksize

    if downloadedsize > 0:
        downloaded_percentage = total_data * 100 / downloadedsize
        self.progressBar.setValue(int(downloaded_percentage))
        QApplication.processEvents()

def handle_Browse(self):
    file_location = QFileDialog.getSaveFileName(self, caption="Save as",
directory='.', filter='All Files (*.*)')
    self.lineEdit_2.setText(file_location[0])

def save_Browse(self):
    pass

##### one video download #####

def get_video_data(self):
    videoURL = self.lineEdit_6.text()

    if videoURL == "":
        QMessageBox.warning(self, 'Error', 'Please enter a valid video URL')
    else:
        video = pafy.new(videoURL)
        # print(video.title)
        # print(video.viewcount)
        # print(video.likes)
        # print(video.dislikes)
        # print(video.duration)
        # print(video.username)

```

```

        video_streams = video.streams
        for stream in video_streams:
            size = humanize.naturalsize(stream.get_filesize())
            data = '{} {} {} \t {}'.format(stream.mediatype, stream.extension,
stream.quality, size)
            self.comboBox.addItem(data)

    def save_Browse(self):
        file_location = QFileDialog.getSaveFileName(self, caption="Save as",
directory='.', filter='All Files (*.*)')
        self.lineEdit_5.setText(file_location[0])

    def download_Video(self):
        video_url = self.lineEdit_6.text()
        save_location = self.lineEdit_5.text()

        if video_url == " or save_location == " :
            QMessageBox.warning(self, 'Error', 'Please enter a valid video URL
and file location')

        else:
            try:
                video = pafy.new(video_url)
                video_streams = video.streams
                video_quality = self.comboBox.currentIndex()
                download
                =
                video_streams[video_quality].download(filepath=save_location,
callback=self.video_progress)

            except Exception as e:
                print(e)
                QMessageBox.warning(self, 'Error downloading', 'Error
downloading video')

```

```
        QMessageBox.information(self, "Download completed", 'File  
downloaded successfully')
```

```
        self.lineEdit_6.setText("")  
        self.lineEdit_5.setText("")  
        self.progressBar_2.setValue(0)  
        self.comboBox.clear()  
        self.label_5.setText("")
```

```
def video_progress(self, total, recieved, ratio, rate, time):
```

```
    if total > 0:
```

```
        self.progressBar_2.setValue(int(ratio * 100))  
        remaining_time = round(time/60, 2)  
        self.label_5.setText('{} minutes remaining'.format(remaining_time))  
        QApplication.processEvents()
```

```
##### play list download #####
```

```
def playlist_download(self):
```

```
    playlist_url = self.lineEdit_3.text()  
    file_location = self.lineEdit_4.text()  
    if playlist_url == " or file_location == ":
```

```
        QMessageBox.warning(self, 'Error', 'Please enter a valid playlist URL  
and file location')
```

```
    else:
```

```
        # try:
```

```
        playlist = pafy.get_playlist(playlist_url)  
        playlist_videos = playlist['items']  
        self.lcdNumber_2.display(len(playlist_videos))
```

```
        os.chdir(file_location)
```

```
        if os.path.exists(str(playlist['title'])):  
            os.chdir(str(playlist['title']))
```

```

else:
    os.mkdir(str(playlist['title']))
    os.chdir(str(playlist['title']))

current_video = 1
quality = self.comboBox_2.currentIndex()
self.lcdNumber.display(current_video)
QApplication.processEvents()

for video in playlist_videos:
    current_video = video['pafy']
    current_video_stream = current_video.streams
    self.lcdNumber.display(current_video)
    QApplication.processEvents()
    download
current_video_stream[quality].download(callback=self.playlist_progress)
    QApplication.processEvents()
    current_video += 1

# except Exception as e:
#     print(e)
#     QMessageBox.warning(self, 'Downloading failed', 'Please
enter a valid playlist URL and file location')

def playlist_progress(self, total, recieved, ratio, rate, time):
    if total > 0:
        self.progressBar_3.setValue(int(ratio * 100))
        remaining_time = round(time/60, 2)
        self.label_6.setText('{} minutes remaining'.format(remaining_time))
        QApplication.processEvents()

def playlist_directory(self):
    file_location = QFileDialog.getExistingDirectory(self, "select download
directory")

```

```
self.lineEdit_4.setText(file_location)
```

```
##### menu #####
```

```
def Open_home(self):
```

```
    self.tabWidget.setCurrentIndex(0)
```

```
def Open_Download(self):
```

```
    self.tabWidget.setCurrentIndex(1)
```

```
def Open_Youtube(self):
```

```
    self.tabWidget.setCurrentIndex(2)
```

```
def Open_setting(self):
```

```
    self.tabWidget.setCurrentIndex(3)
```

```
##### themes #####
```

```
def qdark_style(self):
```

```
    style = open('themes/qdarkstyle.css')
```

```
    style = style.read()
```

```
    self.setStyleSheet(style)
```

```
def qlight_style(self):
```

```
    self.setStyleSheet("")
```

```
def qdarkorange_style(self):
```

```
    style = open('themes/qdarkorange.css')
```

```
    style = style.read()
```

```
    self.setStyleSheet(style)
```

```
def main():
```

```
app = QApplication(sys.argv)
window = MainApp()
window.setWindowTitle("Download manager")
window.show()
app.exec_()
```

```
if __name__ == '__main__':
    main()
```

```
# https://www.youtube.com/watch?v=WVDaZ0jm5FY
```

```
#
```

```
https://www.youtube.com/playlist?list=PLnxmljXZzNJwJi1n-qFee8vDTAYS4i\_\_s3
```

```
# C:\Users\DeI\Downloads
```