

PROFESSIONAL TRAINING REPORT
at
Sathyabama Institute of Science and Technology
(Deemed to be University)

Submitted in partial fulfillment of the requirements for the award
of Bachelor of Engineering Degree in Information Technology

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NOVEMBER 2021



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)



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DEPARTMENT OF INFORMATION TECHNOLOGY

BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of SARANYA.M (Reg. No: 39120103) who carried out the project entitled “**HOSTING A STATIC WEB PAGE IN CLOUD**” under my supervision from June 2021 to November 2021.

Internal Guide

Dr. P. Ajitha

Submitted for Viva voce Examination held on _____

Internal Examiner

External Examiner

DECLARATION

I, **SARANYA M** hereby declare that the project report entitled “**HOSTING A STATIC WEB PAGE IN CLOUD**” done by me under the guidance of **Dr. P.AJITHA** is submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering Degree in Information Technology.

DATE:

PLACE:

SIGNATURE OF THE CANDIDATE

ACKNOWLEDGEMENT

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Assignment 0: -

Week 1 : Assignment 1: -

Week 2 : Assignment 2: -

Week 3 : Assignment 3: **90.0**

Week 4 : Assignment 4: **100.0**

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Week 7 : Assignment 7: **95.0**

Week 8 : Assignment 8: **90.0**

ABSTRACT

Amazon Web Services offers a broad set of global cloud-based products including compute, storage, databases, analytics, networking, mobile, developer tools, management tools, IoT, security, and enterprise applications: on-demand, available in seconds, with pay-as-you-go pricing. From data warehousing to deployment tools, directories to content delivery, over 200 AWS services are available. New services can be provisioned quickly, without the upfront capital expense. This allows enterprises, start-ups, small and medium-sized businesses, and customers in the public sector to access the building blocks they need to respond quickly to changing business requirements. This whitepaper provides you with an overview of the benefits of the AWS Cloud and introduces you to the services that make up the platform.

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CHAPTER-1

INTRODUCTION

Cloud Computing provides an alternative to the on-premises datacentre. With an on-

premises datacentre, we have to manage everything, such as purchasing and installing

hardware, virtualization, installing the operating system, and any other required applications,

setting up the network, configuring the firewall, and setting up storage for data. After doing all

the set-up, we become responsible for maintaining it through its entire lifecycle.

1.1 Definition of Cloud Computing

Cloud computing is the delivery of different services through the Internet. These resources include tools and applications like data storage, servers, databases, networking, and software.

Rather than keeping files on a proprietary hard drive or local storage device makes it possible to save them to a remote database. As long as an electronic device has access to the web, it has access to the data and the software programs to run it.

Cloud computing is a popular option for people and businesses for a number of reasons including cost savings, increased productivity, speed and efficiency, performance, and security.

Cloud computing is named as such because the information being accessed is found remotely in the cloud or a virtual space. Companies that provide cloud services enable users to store files and applications on remote servers and then access all the data via the Internet. This means the user is not required to be in a specific place to gain access to it, allowing the user to work remotely

1.2 Types of Cloud Services

Regardless of the kind of service, cloud computing services provide users with a series of functions including:

- Email
- Storage, backup, and data retrieval
- Creating and testing apps
- Analyzing data
- Audio and video streaming
- Delivering software on demand

Cloud computing is still a fairly new service but is being used by a number of different organizations from big corporations to small businesses, nonprofits to government agencies, and even individual consumers.

1.3 Types of Cloud Computing

Cloud computing is not a single piece of technology like a microchip or a cellphone. Rather, it's a system primarily comprised of three services: software as a service, infrastructure-as-a-service (IaaS), and platform-as-a-service (PaaS).

1. **Software-as-a-service (SaaS)** involves the licensure of a software application to customers. Licenses are typically provided through a pay-as-you-go model or on-demand. This type of system can be found in Microsoft Office's 365.
2. **Infrastructure-as-a-service (IaaS)** involves a method for delivering everything from operating systems to servers and storage through IP-based connectivity as part of an on-demand service. Clients can avoid the need to purchase software or servers, and instead procure these resources in an outsourced, on-demand service. Popular examples of the IaaS system include IBM Cloud and Microsoft Azure.
3. **Platform-as-a-service (PaaS)** is considered the most complex of the three layers of cloud-based computing. PaaS shares some similarities with SaaS, the primary difference being that instead of delivering software online, it is actually a platform for creating software that is delivered via the Internet. This model includes platforms like Salesforce.com and Heroku.

1.4 Advantages of Cloud Computing

Cloud-based software offers companies from all sectors a number of benefits, including the ability to use software from any device either via a native app or a browser. As a result, users can carry their files and settings over to other devices in a completely seamless manner.

Cloud computing is far more than just accessing files on multiple devices. Thanks to cloud computing services, users can check their email on any computer and even store files using services such as Dropbox and Google Drive.

Cloud computing services also make it possible for users to backup their music, files, and photos, ensuring those files are immediately available in the event of a hard drive crash.

The cloud structure allows individuals to save storage space on their desktops or laptops. It also lets users upgrade software more quickly

because software companies can offer their products via the web rather than through more traditional, tangible methods involving discs or flash drives.

1.5 Disadvantages of the Cloud

With all of the speed, efficiencies, and innovations that come with cloud computing, there are, naturally, risks.

Security has always been a big concern with the cloud especially when it comes to sensitive medical records and financial information. While regulations force cloud computing services to shore up their security and compliance measures, it remains an ongoing issue.

Servers maintained by cloud computing companies may fall victim to natural disasters, internal bugs, and power outages, too. The geographical reach of cloud computing cuts both ways: A blackout in California could paralyze users in New York, and a firm in Texas could lose its data if something causes its Maine-based provider to crash.

As with any technology, there is a learning curve for both employees and managers. But with many individuals accessing and manipulating information through a single portal, inadvertent mistakes can transfer across an entire system.

CHAPTER-2

AWS(AMAZON WEB SERVICES)

2.1 Cloud computing with AWS

Amazon Web Services (AWS) is the world's most comprehensive and broadly

adopted cloud platform, offering over 200 fully featured services from data centers globally. Millions of customers—including the fastest-growing startups, largest enterprises, and leading government agencies—are using AWS to lower costs, become more agile, and innovate faster.

2.2 AWS Most functionality

AWS has significantly more services, and more features within those services, than any other cloud provider—from infrastructure technologies like compute, storage, and databases—to emerging technologies, such as machine learning and artificial intelligence, data lakes and analytics, and Internet of Things. This makes it faster, easier, and more cost effective to move

your existing applications to the cloud and build nearly anything you can imagine.

2.3 Advantages of AWS

1) Flexibility

We can get more time for core business tasks due to the instant availability of new features and services in AWS.

It provides effortless hosting of legacy applications. AWS does not require learning new technologies and migration of applications to the AWS provides the advanced computing and efficient storage.

AWS also offers a choice that whether we want to run the applications and services together or not. We can also choose to run a part of the IT infrastructure

in AWS and the remaining part in data centres.

2) Cost-effectiveness

AWS requires no upfront investment, long-term commitment, and minimum expense when compared to traditional IT infrastructure that requires a huge investment.

3) Scalability/Elasticity

Through AWS, autoscaling and elastic load balancing techniques are automatically scaled up or down, when demand increases or decreases respectively. AWS techniques are ideal for handling unpredictable or very high loads. Due to this reason, organizations enjoy the benefits of reduced cost and increased user satisfaction.

4) Security

AWS provides end-to-end security and privacy to customers.

AWS has a virtual infrastructure that offers optimum availability while managing full privacy and isolation of their operations.

Customers can expect high-level of physical security because of Amazon's several years of experience in designing, developing and maintaining large-scale IT operation centers.

AWS ensures the three aspects of security, i.e., Confidentiality, integrity, and availability user's data.

2.3 Most secure

AWS is architected to be the most flexible and secure cloud computing environment

available today. Our core infrastructure is built to satisfy the security requirements for

the military, global banks, and other high-sensitivity organizations. This is backed by

a deep set of cloud security tools, with 230 security, compliance, and governance

services and features. AWS supports 90 security standards and compliance

certifications, and all 117 AWS services that store customer data offer the ability to

encrypt that data.

CHAPTER – 3

INFRASTRUCTURE

3.1 Cloud Infrastructure

It refers to the software and the hardware components such as storage drive, hardware,

servers, virtual software, other cloud management software, and other networking

devices; all work together to support the computing requirement of the cloud computing

model. Moreover, cloud technology holds a software abstraction layer that virtualizes the

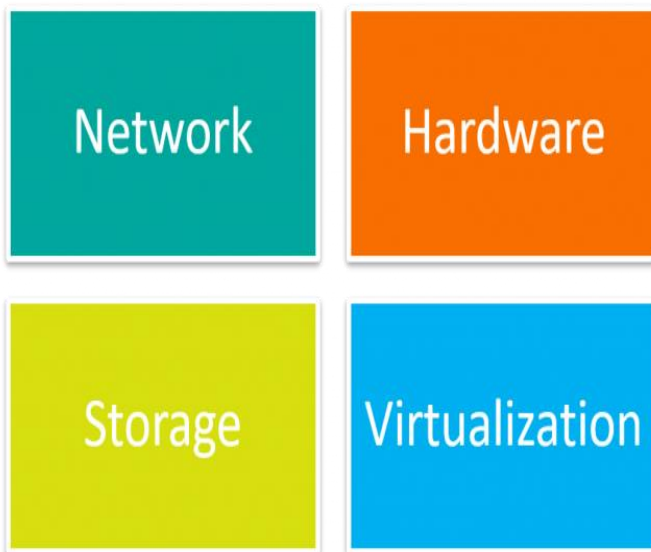
cloud resource and locally presents them to users.

3.2 Components of Cloud Infrastructure



Cloud Infrastructure

Infrastructure components necessary to cloud services



3.3 Characteristics of Cloud Infrastructure

High scalability

Flexible resource pooling

On-demand self-service provisioning

Secure with multiple layers of security against cyber-attacks

As-a-service delivery model charged on a service consumption-basis

Highly available access to IT resources and services

Managed by the cloud vendor

3.4 Deployment Models of Cloud Infrastructure

The three most common cloud deployment models are categorized like this:

Public Cloud

Private Cloud

Hybrid Cloud

3.5 Limitations of Cloud Infrastructure

The limitations of cloud technology concerning infrastructure are:

Scalability

Intelligent Monitoring

Security

CHAPTER – 4

BENEFITS

Benefits of Amazon Cloud Computing

Pricing Benefits

Certification Benefits

Economical

Tiered Network

Easy Migration

Enhanced Performance

4.1 Benefits of AWS S3

Amazon S3 has innumerable benefits and some of them are stated below-



a. Compliance Capability

Amazon S3 supports three different forms of encryption. For auditing purpose, S3 provides

a secure integration with **AWS Cloudtrail** to monitor and retain storage API call activities.

Amazon Macie is a platform by AWS which uses machine learning to automatically discover, arrange and secure the data in AWS. S3 also supports security standards and compliance certifications.

b. Flexible Management

Storage administrators help to arrange report and visualize data usage. This will help to monitor the data and reduce cost while improving the services.

Amazon S3 along with the **AWS Lambda** helps customers to log activities, define alerts and

many more functions without managing any other infrastructure.

c. Flexible data transfer

Amazon S3 provides myriads of ways to transfer data into the Amazon S3. This is possible

with the help of the API which transfers the data through the internet. Direct connect is one of

the major sources for the data transfer among S3 which helps to transfer data to the public

as well as private networks.

d.A systematic way of work

AWS S3 allows the user to run the Big data analytics on a particular system without moving it

to another analytics system. Amazon Redshift spectrum allows the user to run both the data

warehouse and the S3.

AWS S3 select helps the user to retrieve the data back which the user is in need of the S3

objects. Amazon Athena provides the user the vast amount of unstructured data to a user familiar with SQL.

e. Durability, Availability, and Scalability

Amazon S3 is most durable as it works on global cloud infrastructure. The data is transferred

within three physical availability zones which are far away from the AWS Region.

The S3 is available in most of the places and it offers AWS customer an easier and effective

way to design and operate applications and database.

4.2 Uses of Amazon S3

Data Archiving

Large Data Storage and Analytics

Backup and Recovery

4.3 Advantages of S3



CHAPTER – 5

HOSTING STATIC WEBSITE IN AWS

5.1 Create the Website

Create the web page using HTML,CSS, Bootstrap for frontend.

Without using CSS, you will not be able to make the web page, more attractive.

In this article, the main focus is to be implement the CSS.

In order to design a web page first we need to create an HTML web page.

Creating web page: In this section, we will create a simple structure of web page by

using and <sec> and tags. Store in folder.

Design the website with the components like Home page, Login page,Registration form,About the website,and finally keep the contact us details for the user who need

to contact for library books.

Finally in order to create the book informations as like,Book details, request for books, book issue and return details have to infuse in the web page.

After this,host this website in the AWS cloud.

5.2 Hosting a Website in AWS

Create the AWS account in amazon management console.

Go to service and need to select Storage S3.

To store the web site in cloud management.

Create the bucket using the name of html-library-project.

Then click the public option on object to be in public then Click the create button option.

Then goto the properties to enable static web site and then save the html name to host it.

After completing this, the created url link will be updated, use that url link copy that and open a new tab to get the output.

Finally the website will be deployed in the cloud service.

CHAPTER – 6

CONCLUSION

This project is taken for upload the static web page in AWS cloud service.

An Online Library Management System is developed where the users can easily make an order for the book from the online library .

The Library Management System allows the user to store the book details and the person's details.

This software allows storing the details of all the data related to library.

system also handles books database. If the reader needs a book, they can order the

book request for home delivery by just submitting an online form. Readers usually tend to forget the date to return their library books, so this system even calculates fine depending on the expiry date.

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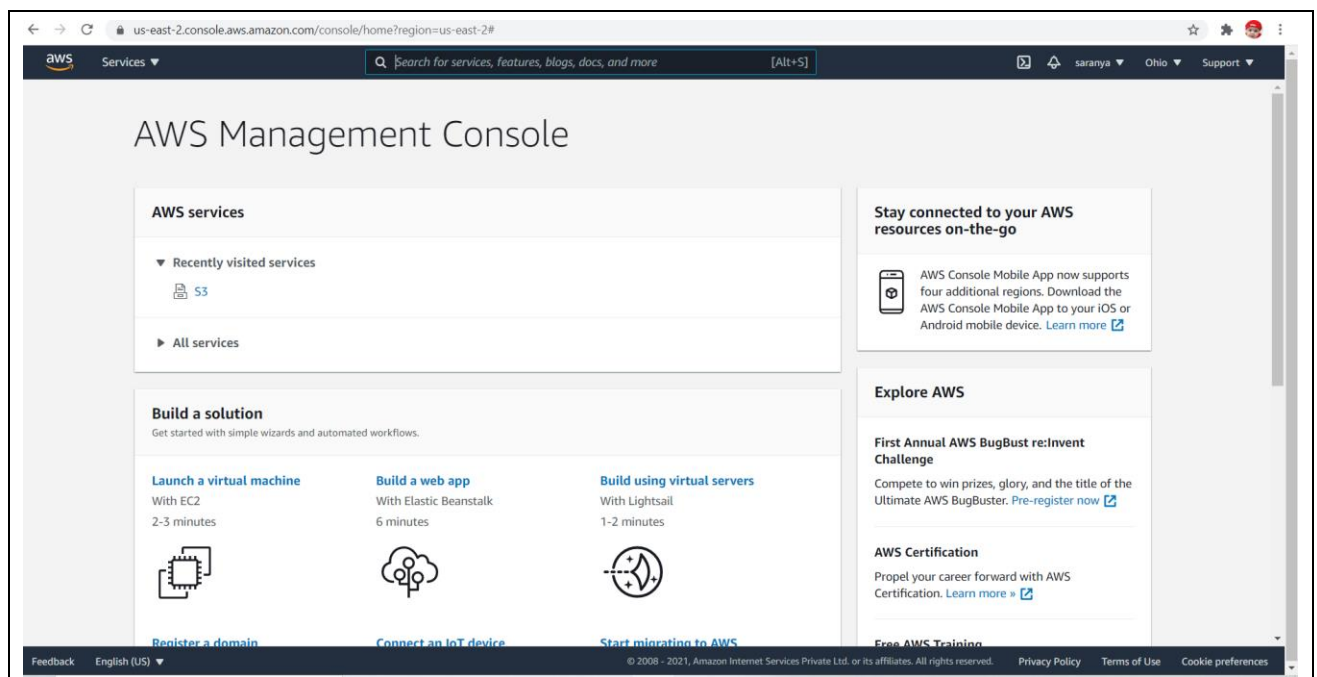
-nabil-kassi

4. For more information -<https://kharbari.com/cloud-computing-reference-model/>

5.jpg.com/books has been taken as reference.

APPENDIX A

SNAPSHOTS



1. CREATE A S3 BUCKET

← → ↺

s3.console.aws.amazon.com/s3/home?region=us-east-2#

☆ ⚙️ 👤

aws

Services ▾

Search for services, features, blogs, docs, and more

[Alt+S]

🔍

saranya ▾

Global ▾

Support ▾

Amazon S3

×

Buckets

Access Points

Object Lambda Access Points

Multi-Region Access Points

Batch Operations

Access analyzer for S3

Block Public Access settings for this account

▼ Storage Lens

Dashboards

AWS Organizations settings

Feature spotlight 3

▶ AWS Marketplace for S3

📘 We're continuing to improve the S3 console to make it faster and easier to use. If you have feedback on the updated experience, choose Provide feedback.

Provide feedback

🔍

Amazon S3

▶ Account snapshot

Storage lens provides visibility into storage usage and activity trends. [Learn more](#)

View Storage Lens dashboard

Buckets (1) [Info](#)

🔄

📄 Copy ARN

Empty

Delete

Create bucket

🔍 Find buckets by name

< 1 > ⚙️

Name ▲	AWS Region ▼	Access ▼	Creation date ▼
html-library-project	US East (Ohio) us-east-2	Objects can be public	November 12, 2021, 18:45:34 (UTC+05:30)

Feedback

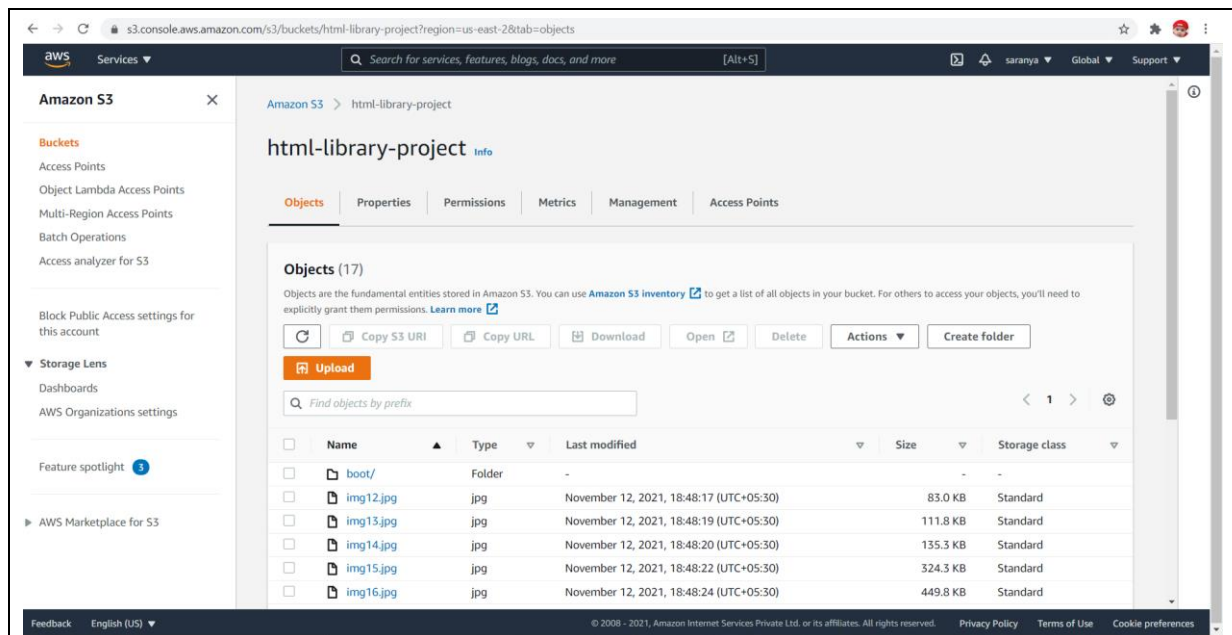
English (US) ▾

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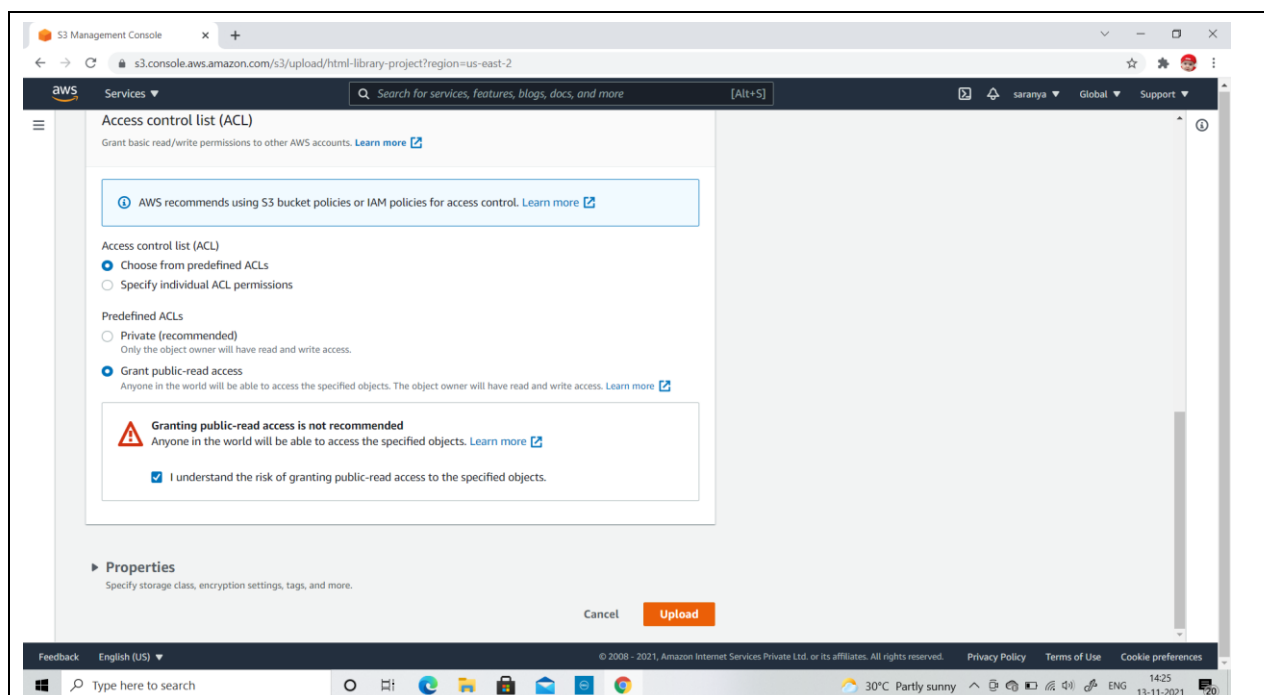
[Privacy Policy](#)

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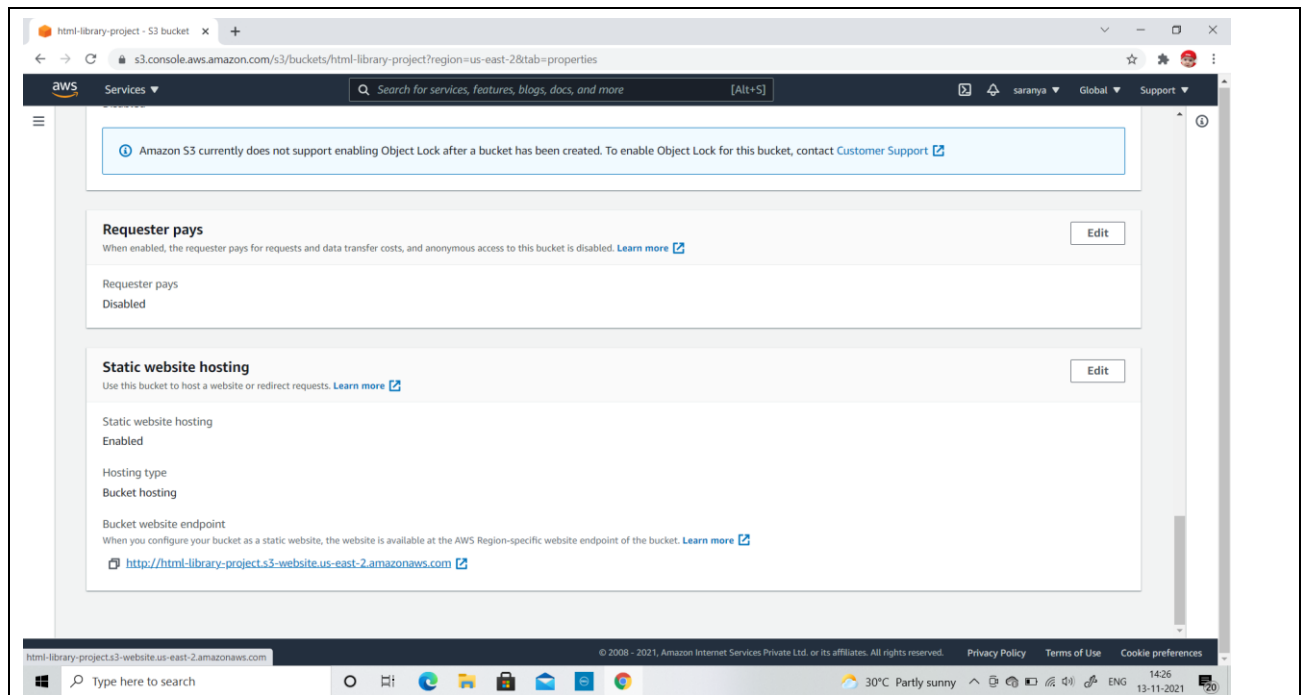
[Cookie preferences](#)



2. ADD FILES AND FOLDER



3.GIVE ACCESS TO THE OBJECTS



4.CREATED URL LINK