

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 Technology Degree in

Information Technology

By

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DEPARTMENT OF INFORMATION TECHNOLOGY

SCHOOL OF COMPUTING

SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

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AUGUST 2020



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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **NANDHINI.V (Reg No. 38120053)** and who carried out the project entitled "**DIGITAL ID CARD GENERATOR WITH UNIQUE QR CODE**" under our supervision from August 2020 to January 2019.

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DECLARATION

I **GAYATHRI K.S. (Reg No:37120027)** hereby declare that the Project Report entitled
 “DIGITAL ID CARD GENERATOR WITH UNIQUE QR CODE” done by me
under the guidance of **Dr. Y. BEVISH JINILA, M.E., Ph.D.**, is submitted in partial fulfillment
of the requirements for the award of Bachelor of Technology degree in Information
Technology.

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SIGNATURE OF THE CANDIDATE

ACKNOWLEDGEMENT

I am pleased to acknowledge our sincere thanks to Board of management of **SATHYABAMA** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

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This is to certify that **NANDHINI V** student of **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, BTECH/IT** has undergone the Internship Training through online in our concern entitled **PYTHON** from **12th Aug 2020** to **26th Aug 2020** in relevant departments related to their academic studies.

During the above period, the performance was good & we wish great success in all your future endeavours.

J. meru

Technology drives the world. We are the people who are behind the technology.

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ABSTRACT

This project is about creating digital individual ID card for the user. This can be individually created to the employees of an organization or Institution. This runs in python. The image can be created by using the pillow module. Whenever the user enters the info, the particular info will be stored in a variable. By using the ImageDraw function that is available in the pillow (known as PIL) module, each and every info about the user will be drawn in the image. This ID card also has a QR code which is unique for every user. The overall modules used in this project are PILLOW and QRCODE. This is created using the company name and the ID number. Thus, the Identity Card is generated for each user.

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CHAPTER 1

INTRODUCTION

1. BACKGROUND

Now-a-days with rapid growth of population, people need to be identified and it is now a must for every organization from a company to a large country to have the Identity card (ID) for the every people. The entire project is easily understood by a normal person who knows simple English and python. The language used in this project is python. For a better view of the final ID card, the best image viewer can be used. Finally, it is a user-friendly application for the company as well as the user.

2. OUTLINE OF THE PROJECT

This project is about creating Identity Card for companies which has large number of users/employees. By generating a unique QR code, this project creates individual and secured ID cards for employees. This QR code is created by using the company name and the unique ID number that is given to the users/employees. The ID card generator will ask for the user's information like Name, Company name, DOB, Blood group and adds this information to the image. This image adds all the information using the co-ordinate values. All these image activities are done by using the pillow module which is known as PIL. Thus, at the end of the project an Identity Card will be generated for the user.

1.3 ORGANIZATION OF THE REPORT

Chapter 2 deals with Aim, Problem Statement, Literature Review and Scope of the present investigation. Chapter 3 deals with General, Algorithm, Project description. Chapter 4 deals with Requirement, Role of Python and Results And Discussion. Chapter 5 deals with Conclusion and Future work.

CHAPTER 2

AIM & SCOPE

1. AIM

The main objective of this project is to generate a unique ID card for all the users. When it comes to uniqueness, generating QR code for each user is the best way. This QR code is created by using the company name and the ID number that is given to the users individually. Thus, the user can use the QR code for other purpose also.

2. PROBLEM STATEMENT

The job is to create an ID card for the users in a large company. When there are more employees in a company, generating an ID card individually is a bit tough task. So, by using this ID card generator, the task is made easier for the users.

3. LITERATURE REVIEW

In this project, an individual ID card will be generated for every user. The QR code given to the user is unique and highly secured. The QR code is made up with the company name and the individual ID number. First the code generates the QR code separately and saves it as a BMP file. Once the QR code is generated, it can be added with the existing details and saved as a PNG file. The modules used are, **PIL** – This is also known as pillow module. Pillow is the friendly PIL fork by Alex Clark and Contributors. PIL is the Python Imaging Library by **Fredrik Lundh** and Contributors.

Python Imaging Library (abbreviated as PIL) (in newer versions known as Pillow) is a free library for the Python programming language that adds support for opening, manipulating, and saving many different image file formats.

qrcode - This module is a QR code generator that is simple to use and written in

pure python. The module can automate most of the building process for creating QR codes. Most codes can be created using only two lines of code. This module creates the QR code by using the user info and creates it with '.BMI' extension. Thus, the secured digital ID card can be easily generated.

2.4 SCOPE

Python is one of the most prevalent coding languages. Alongside with being a high-level and general-purpose programming language, Python is also an object oriented and open source. Thus, the ID card can be easily generated within seconds. When we add image here, the scope can be incremented. Thus, generating the secured ID card with python is easily implemented here.

CHAPTER 3

ALGORITHMS AND METHODS

1. GENERAL

In this project, an individual ID card will be generated for every user. The QR code given to the user is unique and highly secured. The QR code is made up with the company name and the individual ID number. First the code generates the QR code separately and saves it as a BMP file. Once the QR code is generated, it can be added with the existing details and saved as a PNG file. The modules used are,

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qrcode - This module is a QR code generator that is simple to use and written in pure python. The module can automate most of the building process for creating QR codes. Most codes can be created using only two lines of code. This module creates the QR code by using the user info and creates it with .BMP extension. Thus, the secured digital ID card can be easily generated.

2. ALGORITHM

1. Install the modules PILLOW and QRCODE which are needed to generate Image and qrcode.
2. Get inputs from the user for Company name, Name, Gender, DOB, Blood Group and address.
3. Assign color values for the obtained values and save it in the perfect Coordination. Example: (50,60).
4. Save the image with '.png' extension and by using the name value of the

User.

5. Generate the QR CODE using the company name and the unique ID card Number.
6. Paste the QR code that is generated in the image created and save the file.
7. Exit from ID card generator.

3.3 PROJECT DESCRIPTION

PYTHON is the language used here to make ID card generator. When we run the project, the user will be asked for the company name, his name, gender, DOB and address. Whenever the user enters value for each field, it'll be drawn in the coordination points. Such that, all the values are drawn in the correct place. Once all the values are collected, the QR CODE is generated based on the company name and ID number. It will be saved as a separate file with '.bmi' extension. Once the QR CODE is generated, it will be pasted in the generated ID card. The generated ID card will have the '.jpg' extension. The name of the file will be the name of the employee name. Thus, the ID card is generated and stored in the file location.

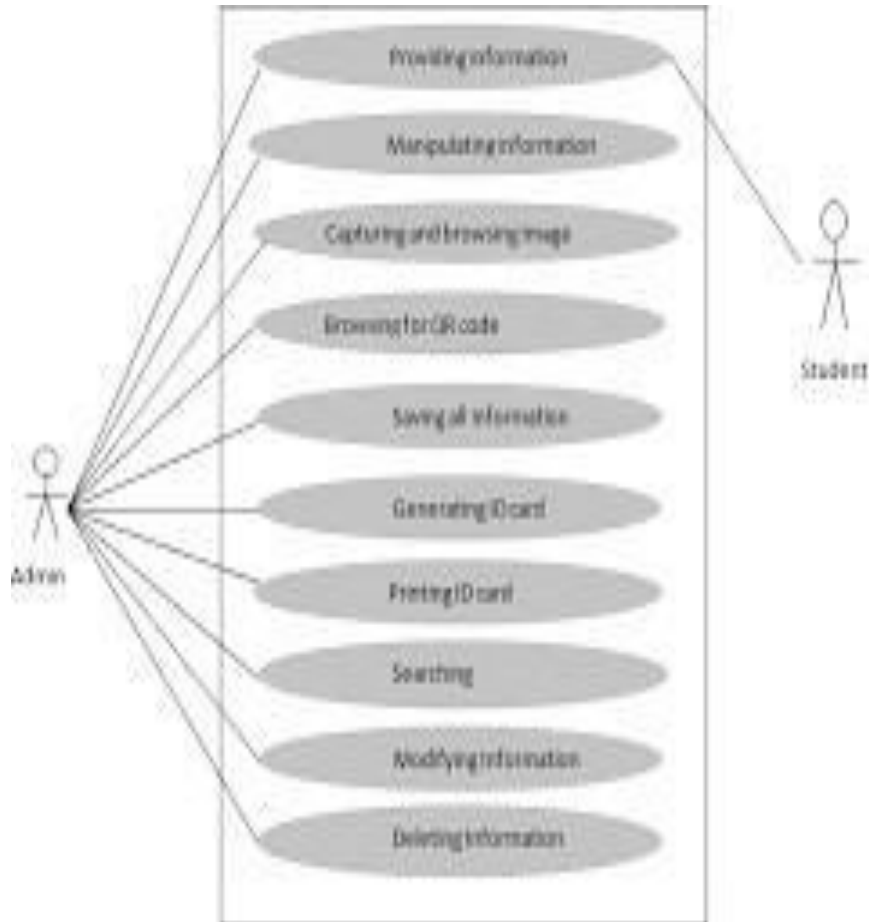


Fig: 3.1 Architecture diagram

The above diagram represents the case diagram for QR code used for generating student ID card. The following diagram shows that the admin is accessing the following information which we need for generating an company ID card the following are the information accessed by the Admin are providing info, manipulating etc..Thus, after collecting all kind of information the admin generates an ID card.

CHAPTER 4

SYSTEM IMPLEMENTATION

4.1 REQUIREMENTS

I. HARDWARE REQUIREMENTS

- A system with minimum 2GB of RAM.
- Keyboard.
- Monitor.

II. SOFTWARE REQUIREMENTS

- Python 3.6 version installed in the system.
- Pillow & qrcode module using 'pip' command.
- Any one image viewer.

4.2 ROLE OF PYTHON

Python is a popular, general-purpose programming language with an emphasis on being readable and allowing programmers to use fewer lines of code to accomplish tasks than in older languages. Libraries such as NumPy, SciPy and Matplotlib make it useful for scientific computing. In our project, python is the programming language that is used for creating ID card generator. Here, using python the lines of code is reduced and the inputs are easily pasted in the image. We can also get the date and time using the 'datetime' module. Python is also used in film industries. Using the image, imagedraw and imagefont functions the image can be easily generated. Thus, python plays a major role in all the fields today.

4.3 RESULTS AND DISCUSSION

The result of the project is the ID card with the unique QR CODE. The values for company name, employee name, DOB, gender, blood group, address and phone number are perfectly added as per the co-ordinate values. The generated QR CODE is pasted and the final ID card is created as the end of the project.

```
===== RESTART: C:/Users/elcot/Desktop/Pt-1/gayu.py =====
+++++ 04-09-2019 ID CARD Generator 07:33:59 PM +++++
+++++

All Fields are Mandatory
Avoid any kind of Spelling Mistakes
Write Everything in uppercase letters

Enter Your Company Name: RAJ
Enter Your Full Name: SUSILA
Enter Your Gender: F
Enter Your Age: 25
Enter Your Date Of Birth: 28.01.1995
Enter Your Blood Group: O +VE
Enter Your Mobile Number: 7865438976
Enter Your Address: ARR ROAD

Your ID Card Successfully created in a PNG file SUSILA.png

Press any key to Close program...
```

Fig 4.1 USER INPUT FIELD

The above figure shows that ID Card generated for the student needs the following field Should be filled in mandatory. While running the project, this particular window gets opened the user will be asked for the details. Like in the above figure we got to enter some details regarding the name of the company, Full Name, Gender etc.. After the Following details are been filled an ID card is created in an PNG file with the extension .png.



Fig 4.2 THE GENERATED QRCODE

This module is a QR code generator that is simple to use and written in pure python. The module can automate most of the building process for creating QR codes. Most codes can be created using only two lines of code. This module creates the QR code by using the user info and creates it with .BMI extension. Thus, the secured digital ID card can be easily generated.



Fig 4.3 GENERATED ID CARD

It Shows the generated ID Card with the fields names which we entered while generating. They are Name, Gender, Age, Dob, Blood Group, Phone no, Address. As the generated card consists of QRCODE, Is highly Secured and can be used for other purposes too.

CHAPTER 5

CONCLUSION AND FUTURE WORK

5.1 CONCLUSION

This application is very simple. It is easily understood to the users who has knowledge in python and English. This project will be useful for the company for creating ID cards when there are more employees joined at a time. As we added QRCODE in that, the ID card is more secured and can be accessed for other purposes too.

5.2 FUTURE WORK

This project can be further implemented by adding the photo of the user. This can be done by using the canvas function that is available in the pillow module.

REFERENCES

- 1 PYTHON - <https://www.w3schools.com/python/>
- 2 PYTHON – Sololearn application
- 3 Introduction to programming using python – Y.DANIEL LIANG
- 4 Github – www.github.com/id-card-generator/

APPENDICES

SOURCE CODE

```
from PIL import Image, ImageDraw, ImageFont
image = Image.new('RGB', (1000,1300), (255, 0, 153))
draw = ImageDraw.Draw(image)
font = ImageFont.truetype('arial.ttf', size=45)
import random
import os
import datetime
import qrcode

os.system("title ID CARD Generator by NAND")


d_date = datetime.datetime.now()
reg_format_date = d_date.strftime("%d-%m-%Y\\t\\t\\t\\t ID CARD Generator\\t\\t\\t\\t
%l:%M:%S %p")
print
('+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
+ ++++++++++++++++++++++++++++++++++++++++++++++++++')
print (reg_format_date)
print
('+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
+ ++++++++++++++++++++++++++++++++++++++++++++++++++')

# starting position of the message
print('\n\n All Fields are Mandatory')
print('Avoid any kind of Spelling Mistakes')


print('Write Everything in uppercase letters')
```

```
(x, y) = (50, 50)
message = input('\n Enter Your Company Name: ')
company=message
color = 'rgb(0, 0, 0)'
font = ImageFont.truetype('arial.ttf', size=80)
draw.text((x, y), message, fill=color, font=font)
```

adding an unique id number. You can manually take it from user

```
(x, y) = (600, 75)
idno=random.randint (10000000,90000000)
message = str('ID '+str(idno))
color = 'rgb(0, 0, 0)' # black color
font = ImageFont.truetype('arial.ttf', size=60)
draw.text((x, y), message, fill=color, font=font)
```

```
(x, y) = (50, 250)
message = input('Enter Your Full Name: ')
name=message
color = 'rgb(0, 0, 0)' # black color
font = ImageFont.truetype('arial.ttf', size=45)
draw.text((x, y), message, fill=color, font=font)
```

```
(x, y) = (50, 350)
message = input('Enter Your Gender: ')
color = 'rgb(0, 0, 0)' # black color
draw.text((x, y), message, fill=color, font=font)
```

```
(x, y) = (50, 450)
message = input('Enter Your Age: ')
color = 'rgb(0, 0, 0)' # black color
draw.text((x, y), message, fill=color, font=font)
```

```
(x, y) = (50, 550)
```

```
message = input('Enter Your Date Of Birth: ')
color = 'rgb(0, 0, 0)' # black color
draw.text((x, y), message, fill=color, font=font)
```

```
(x, y) = (50, 650)
message = input('Enter Your Blood Group: ')
color = 'rgb(0, 0, 0)' # black color
draw.text((x, y), message, fill=color, font=font)
```

```
(x, y) = (50, 750)
message = input('Enter Your Mobile Number: ')
temp=message
color = 'rgb(0, 0, 0)' # black color
draw.text((x, y), message, fill=color, font=font)
```

```
(x, y) = (50, 850)
message = input('Enter Your Address: ')
```

```
color = 'rgb(0, 0, 0)' # black color
draw.text((x, y), message, fill=color, font=font)
```

```
# save the edited image
```

```
image.save(str(name)+'.png')
```

```
img = qrcode.make(str(company)+str(idno))    # this info. is added in QR code, also
add other things
img.save(str(idno)+'.bmp')
```

```
til = Image.open(name+'.png')
im = Image.open(str(idno)+'.bmp') #25x25
```

```
til.paste(im,(600,350))
```

```
til.save(name+'.png')
```

```
print('\n\n\n Your ID Card Successfully created in a PNG file '+name+'.png'))
```

```
eval(input('\n\n Press any key to Close program...'))
```



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