

**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**  
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**JANUARY 2021**



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## SCHOOL OF COMPUTING

### BONAFIDE CERTIFICATE

This is to certify that this Project Report is the Bonafide work of who carried out the project entitled "CROP RECOMMENDATION SYSTEM" under our supervision from August 2020 to November 2020.

Internal Guide

**Dr. S.GOWRI**

Head of the Department

**Dr. R. Subhashini M.E., Ph.D.,**

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Submitted for Viva voce Examination held on \_\_\_\_\_

Internal Examiner

External Examiner

## DECLARATION

I NITHYA B(Reg No:38120054) hereby declare that the Project Report entitled "DIGITAL ID CARD GENERATOR WITH UNIQUE QR CODE" done by me under the guidance of DR.S.GOWRI, at Sathyabama Institute of Science and Technology (Deemed to be University), Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600119 is submitted in partial fulfillment of the requirements for the award of Bachelor of Technology degree in Information Technology.

DATE: 22/01/2021

Place: Chennai

SIGNATURE OF THE CANDIDATE

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## 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.

I convey our thanks to Dr. T. **SASIKALA M.E., Ph.D.**, Dean, School of Computing and Dr. R. **SUBHASHINI M.E., Ph.D.**, Head of the Department, Department of Information Technology for providing us the necessary support and details at the right time during the progressive reviews.

I would like to express our sincere and deep sense of gratitude to our Project Dr. **S.GOWRI** for her valuable guidance, suggestions and constant encouragement paved way for the successful completion of my project work.

I wish to express our thanks to all Teaching and Non-teaching staff members of the Department of **INFORMATION TECHNOLOGY** who were helpful in many ways for the completion of the project.

## TRAINING CERTIFICATE



INT: RE20S044

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that **NITHYA B** student of **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, BTECH/IT** has undergone the Internship Training through online in our concern entitled **PYTHON** from **12<sup>th</sup> Aug 2020** to **26<sup>th</sup> 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. more*

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

**Authorised Signature**



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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**

#### **1.1 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.

#### **1.2 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

#### 2.1 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.

#### 2.2 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.

#### 2.3 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

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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.

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## CHAPTER 3

### ALGORITHMS AND METHODS

#### 3.1 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,

**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 .BMP extension. Thus, the secured digital ID card can be easily generated.

#### 3.2 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.



**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.

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## **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/](https://www.github.com/id-card-generator/)

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## 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 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 Your ID Card Successfully created in a PNG file '+name+'.png")
```

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

```
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..."))
```