QR CODE GENERATOR

A

Mini Project Report

Submitted in partial fulfilment of the

Requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

INFORMATION TECHNOLOGY

By

MAHANKALI CHARAN RAJ,1602-20-737-009

SHANAM GOURIMANASA,1602-20-737-014

SHANIGARAM SUHIDHAR1602-20-737-048

Department of Information Technology

Vasavi College of Engineering (Autonomous)

ACCREDITED BY NAAC WITH 'A++' GRADE

(Affiliated to Osmania University and Approved byAICTE)

Ibrahimbagh, Hyderabad-31

2022

Vasavi College of Engineering (Autonomous)

ACCREDITED BY NAAC WITH 'A++' GRADE

(Affiliated to Osmania University and Approved by AICTE)

Hyderabad-500 031

Department of Information Technology

DECLARATION BY THE CANDIDATE

We, MAHANKALI CHARAN RAJ, SHANAM GOURIMANASA and SHANIGARAM SUHIDER, bearing hall ticket numbers 1602-20-737-009, 1602-20-737-014 and 1602-20-737-048, hereby declare that the project report entitled QR CODE GENERATOR is submitted in partial fulfilment of the requirement for the award of the degree of Bachelor of Engineering in Information Technology.

This is the record of bonafide work carried out by us and the results embodied in this project report have not been submitted to any other university or institute for the award of any other degree or diploma.

MAHANKALI CHARANRAJ

1602-20-737-009

SHANAM GOURIMANASA

1602-20-737-014

SHANIGARAM SUHIDHAR

1602-20-737-048

Dr. K. Ram Mohan rao
Professor & HOD

Dept of IT

ACKNOWLEDGMENT

We extend our sincere thanks to Dr. S. V. Ramana, Principal, Vasavi College of Engineering for his encouragement.

We express our sincere gratitude to Dr. K. Ram Mohan Rao, Professor & Head, Department of Information Technology, Vasavi College of Engineering, for introducing the Mini-Project module in our curriculum, also for his suggestions, motivation, and co-operation for the successful completion of our Mini Project.

We also want to thank and convey our gratitude towards our mini project coordinators Divya and Rajyalaxmi, for guiding us in understanding the process of project development & giving us timely suggestions at every phase.

We would also like to sincerely thank the project reviewers for their valuable inputs and suggestions.

ABSTRACT

The aim of our project is to generate QR codes for student details, where the users need to enter their details like name, roll no. After entering the details, QR code is generated, we can scan and see the output. In this project user will be able generate QR code, scan and view the data encoded in the generated QR code and user can also download the generated QR code. Our project is built by using built-in-methods pyqrcode, shutil. And we used kivy module to implement graphical interface.

TABLE OF CONTENTS

1.INTRODUCTION

1.1. OVERVIEW OF THE PROJECT

The project's objective is to develop an application for generating QR codes for student details.

1.2. FEATURES

1.Encoding the given student data into QR code.

2.Storing generated QR codes.

1.3. SCOPE

A QR code is used to provide easy access to online information through the digital camera on a smartphone or tablet. Quick Response (QR) codes seem to appear everywhere these days. We can see them on posters, websites, product packaging, online payment and many other. Using the QR codes is one of the most interesting ways of digitally connecting people to the internet via mobile phones since the mobile phones have become a basic necessity thing of everyone.

In this project, we present a methodology and generate QR codes for student details, where the users need to enter their details like name, roll no. After entering the details, QR code is generated ,we can scan and see the output.

1.4. HOW OUR PROJECT IS DIFFERENT:

Generation of QR is a application already found but in our project we are going to generate QR code for the student details entered especially for the students of Vasavi college of Engineering and we are going to display the details when we scan the QR. And we are providing an option to save the generated QR codes.

2.TECHNOLOGY

SOFTWARE REQUIREMENTS

1. Windows 7 or newer
2. Processor speed minimum: x64 Processor: 1.4GHz
3. Runtime Environment: PyCharm

HARDWARE REQUIREMENTS

QR scanner

3.PROPOSED WORK

3.1.DESIGN

USE CASES

1.Enter details
2.Scan the QR

USE CASE 1

Name: Details

Actors: User

Description: Allow the user to enter details.

Precondition: None

Postcondition: QR code is generated for the corresponding details.

User	System
1)Enters the corresponding details and submit	
	2)QR code is generated for the given details

USE CASE 2

Name: Scan the code

Actors: Scanner

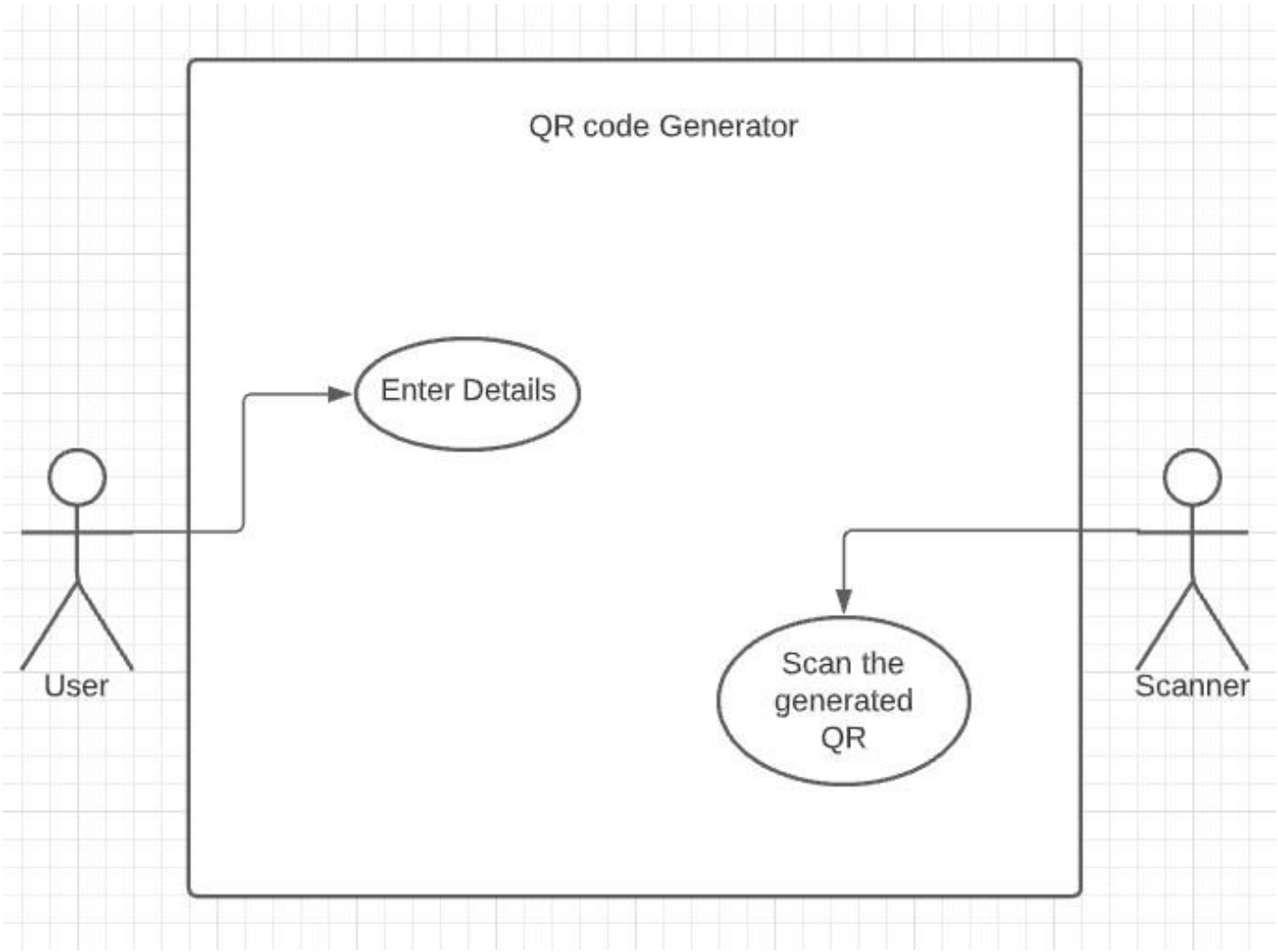
Description: Allows the scanner to scan the generated QR

Precondition: Use any app to scan

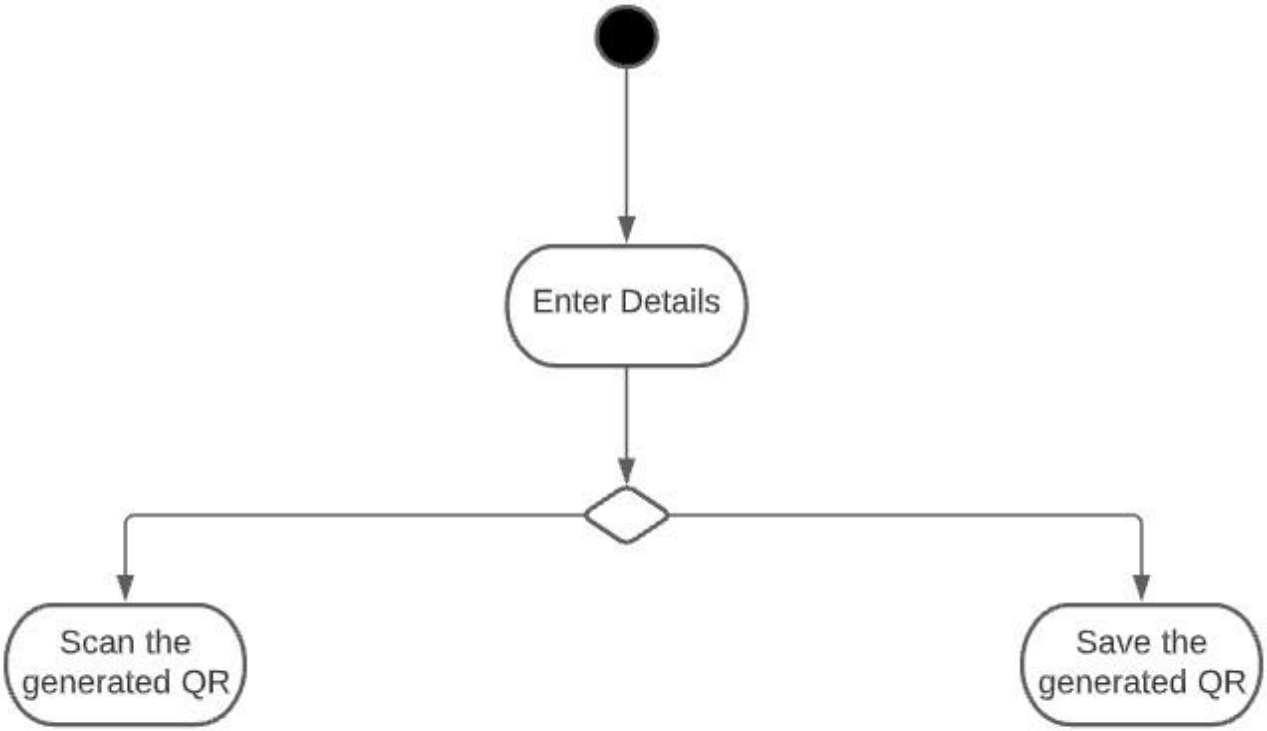
Postcondition: Scans the QR code which is generated and can save the QR.

User	System
1)Scans the generated QR code	
	2)Displays the result which is encoded in the generated QR code. And saves the generated QR code in a local folder

USE CASE DIAGRAM



ACTIVITY DIAGRAM



3.2. IMPLEMENTATION

CODE

```
import shutil
from kivy.lang import Builder
from kivymd.app import MDApp
from kivy.core.window import Window
from kivy.uix.screenmanager import ScreenManager, Screen
import pyqrcode
class Enterdetails(Screen):
    pass
class ViewQR(Screen):
    pass
string="""<Enterdetails>:
    MDLabel:
        text: "VASAVI COLLEGE OF ENGINEERING"
        font_size: 35
        pos_hint: {"center_x": 0.5, "center_y": 0.95}
        halign: 'center'
        size_hint_y: None
        padding_y: 15
    MDLabel:
        text: "Enter details to get QR Code"
        font_size: 25
        pos_hint: {"center_x": 0.5, "center_y": 0.89}
        halign: 'center'
        size_hint_y: None
        padding_y: 15
```

```
MDCard:
    size_hint: 0.95, 0.8
    pos_hint: {"center_x": 0.5, "center_y": 0.45}
    elevation: 10
    padding: 25
    spacing: 25
    orientation: 'vertical'

MDTextField:
    id: rno
    hint_text: "Roll number"
    size_hint_x: 0.4
    font_size: 25
    required: True
    input_type: 'number'
    pos_hint: {"center_x": 0.75, "center_y": 0.75}
    helper_text_mode: "on_error"
    helper_text: "Enter 12 digit roll number"
MDTextField:
    id: name
    hint_text: "Name"
    size_hint_x: 0.4
    required: True
    helper_text_mode: "on_error"
    helper_text: "Enter text"
    font_size: 25
    pos_hint: {"center_x": 0.25, "center_y": 0.75}
MDTextField:
    id: fname
```

```
    hint_text: "Father Name"
    size_hint_x: 0.4
    font_size: 25
    pos_hint: {"center_x": 0.25, "center_y": 0.65}
    required: True
    helper_text_mode: "on_error"
    helper_text: "Enter text"
MDTextField:
    id: dob
    hint_text: "Date of Birth"
    size_hint_x: 0.4
    font_size: 25
    pos_hint: {"center_x": 0.75, "center_y": 0.65}
    required: True
    helper_text_mode: "on_error"
    helper_text: "dd/mm/yyyy"
MDTextField:
    id: gender
    hint_text: "Gender"
    size_hint_x: 0.4
    font_size: 25
    pos_hint: {"center_x": 0.25, "center_y": 0.55}
    required: True
    max_text_length: 1
    helper_text_mode: "on_error"
    helper_text: "M/F"
MDTextField:
    id: semester
    hint_text: "Semester"
```

```
    size_hint_x: 0.4
    font_size: 25
    pos_hint: {"center_x": 0.75, "center_y": 0.55}
    required: True
    max_text_length: 1
    helper_text_mode: "on_error"
    helper_text: "1/2/3/4"
MDTextField:
    id: branch
    hint_text: "Branch"
    size_hint_x: 0.4
    font_size: 25
    pos_hint: {"center_x": 0.25, "center_y": 0.45}
    required: True
    max_text_length: 3
    helper_text_mode: "on_error"
    helper_text: "Enter your branch"
MDTextField:
    id: section
    hint_text: "Section"
    size_hint_x: 0.4
    font_size: 25
    pos_hint: {"center_x": 0.75, "center_y": 0.45}
    required: True
    max_text_length: 1
    helper_text_mode: "on_error"
    helper_text: "A/B/C"
MDTextField:
    id: phn
```

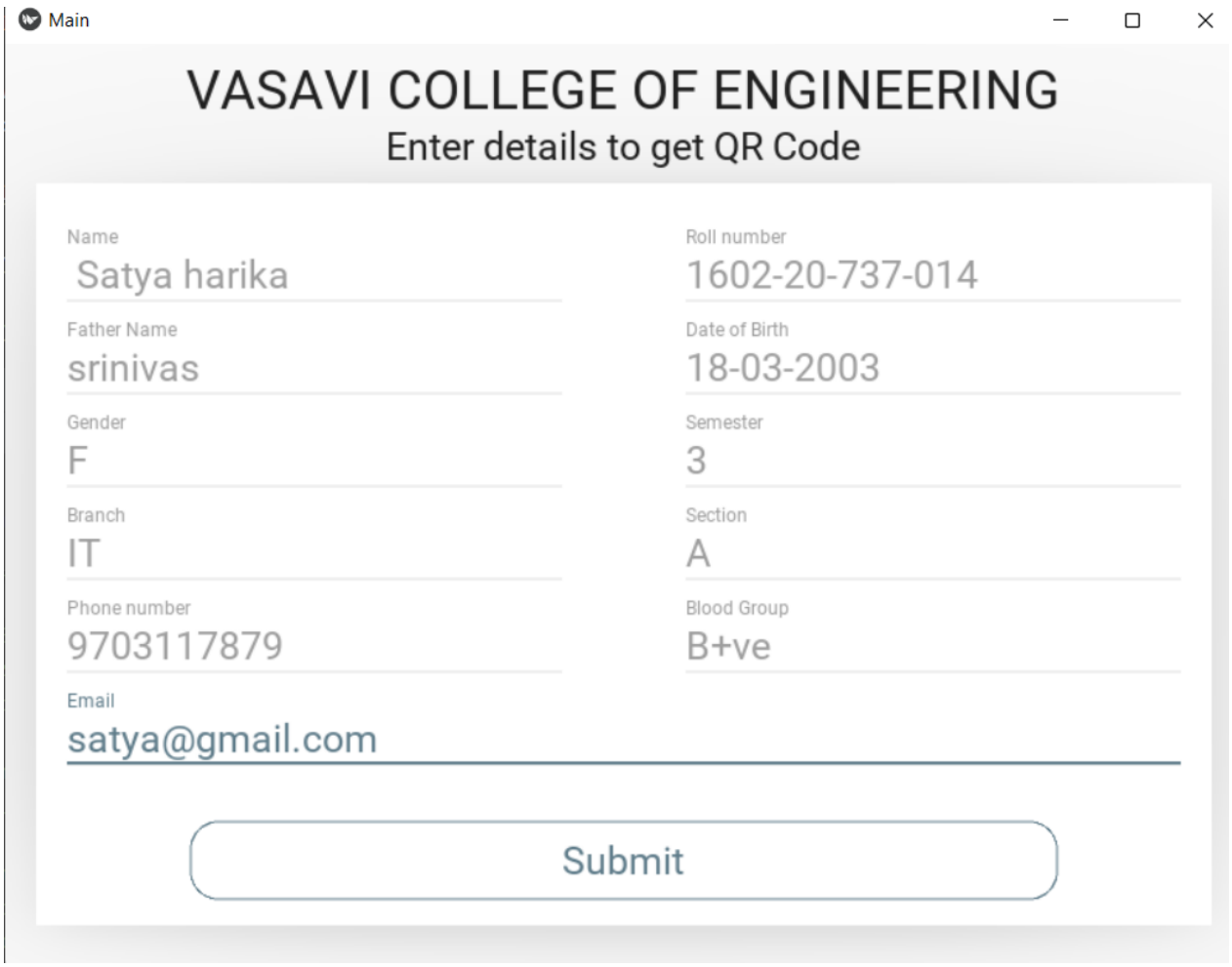
```
    hint_text: "Phone number"
    size_hint_x: 0.4
    font_size: 25
    required: True
    pos_hint: {"center_x": 0.25, "center_y": 0.35}
    helper_text_mode: "on_error"
    helper_text: "Enter 10-digit phone number"
MDTextField:
    id: email
    hint_text: "Email"
    size_hint_x: 0.9
    font_size: 25
    pos_hint: {"center_x": 0.5, "center_y": 0.25}
    required: True
    helper_text_mode: "on_error"
    helper_text: "Enter text"
MDTextField:
    id: blood
    hint_text: "Blood Group"
    size_hint_x: 0.4
    width: 180
    font_size: 25
    pos_hint: {"center_x": 0.75, "center_y": 0.35}
    required: True
    helper_text_mode: "on_error"
    helper_text: "Enter text"
MDRoundFlatButton:
    text: "Submit"
    font_size: 25
```

```
        pos_hint: {"center_x": 0.5, "center_y": 0.12}
        size_hint_x: 0.7
        on_press:
app.finalSubmit(name.text,rno.text,fname.text,dob.text,gender.text,semester.text,branch.text,section.t
ext,phn.text,blood.text,email.text)
<ViewQR>:
    MDLabel:
        text: "VASAVI COLLEGE OF ENGINEERING"
        font_size: 40
        pos_hint: {"center_x": 0.5, "center_y": 0.95}
        halign: 'center'
        size_hint_y: None
        padding_y: 15
    MDLabel:
        text: "Scan this QR Code to get your details"
        font_size: 25
        pos_hint: {"center_x": 0.5, "center_y": 0.88}
        halign: 'center'
        size_hint_y: None
        padding_y: 15
    Image:
        source: app.source
        pos_hint: {"center_x": 0.5, "center_y": 0.5}
        size_hint_y: 0.7
    MDRoundFlatButton:
        text: "Download"
        font_size: 25
        pos_hint: {"center_x": 0.5, "center_y": 0.08}
        size_hint_x: 0.8
        on_press: app.download()"""
```

```
Builder.load_string(string)
sm = ScreenManager()
Window.size = (800, 600)
class MainApp(MDApp):
    def build(self):
        self.theme_cls.theme_style = "Light"
        self.theme_cls.primary_palette = "BlueGray"
        sm.add_widget(Enterdetails(name='enterdetails'))
        sm.current = 'enterdetails'
        return sm
    def finalSubmit(self,name, rno, fname, dob, gender, semester,branch,section,phone,blood,email):
        s = f"VASAVI COLLEGE OF ENGINEERING\n====== ======= ==
==========\nName\t\t:{name}\nRoll no\t\t:{rno}\nFather Name\t:{fname}\nDOB
\t\t:{dob}\nGender\t\t:{gender}\nSemester\t\t:{semester}\nBranch\t\t:{branch}\nSection\t\t:{section}\
nPhone no\t\t:{phone}\nBlood Group\t:{blood}\nEmail id\t\t:{email}\n"
        print(s)
        # Generate QR code
        url = pyqrcode.create(s)
        url.png(f'{name}.png', scale=6)
        self.source=f'{name}.png'
        sm.add_widget(ViewQR(name='viewQR'))
        sm.current='viewQR'
        self.p=name
    def download(self):
        shutil.move(rf'C:\Users\Gouri Manasa\PycharmProjects\ManasaMiniProject\{self.p}.png' ,
r'C:\Users\Gouri Manasa\PycharmProjects\ManasaMiniProject\ALLQRS')
MainApp().run()
```

4.RESULTS

After running the code, a page is created with title "**VASAVI COLLEGE OF ENGINEERING**" '**Enter details'.**



Enter the corresponding details and submit to generate QR.

After submitting, QR code is generated, we can save it or we can scan to get the output.

After scanning we will get the ouput.

Result

QR code details:

VASAVI COLLEGE OF ENGINEERING
====== ======= == ==========
Name : Satya harika
Roll no :1602-20-737-014
Father Name :srinivas
DOB :18-03-2003
Gender :F
Semester :3
Branch :IT
Section :A
Phone no :9703117879
Blood Group :B+ve
Email id :satya@gmail.com

5.ADDITIONAL KNOWLEDGE GAINED

With this project we have learnt about various built-in methods, modules and packages. We have learnt to implement GUI. We gained so much information about how various modules work and how various packages are used to implement GUI. We learnt about QR codes, how it works, how it is implemented and useof QR codes. We used kivy package to implement GUI and learnt so much about kivy package.

6.CONCLUSION AND FUTURE WORK

We used some special feature like generating QR codes for the user given details using graphical interface and also we have provided download option so that we can save the QR codes in the local folder which may help us to print on student id cards.

By storing the student details in the form of QRcodes will be usefull in many ways like we can print QR codes on Student id cards by just scanning that we can take attendance &it can be also be printed on halltickets etc..

7.REFERENCES

Python Programming: Using Problem Solving Approach by Reema Thareja.

https://kivy.org/doc/stable/