# **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

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**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**

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**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.

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**1.INTRODUCTION**

* 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**

**a.SOFTWARE REQUIREMENTS:**

1. Windows 7 or newer

2. Processor speed minimum: x64 Processor: 1.4GHz

3. Runtime Environment: PyCharm

**b.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:**

Diagram

Description automatically generated

**ACTIVITY DIAGRAM:**

Diagram

Description automatically generated

**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.text,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’.

**![Graphical user interface, application

Description automatically generated]()**

Enter the corresponding details and submit to generate QR.

**![Graphical user interface, text, application

Description automatically generated]()**

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

**![Qr code

Description automatically generated]()**

After scanning we will get the ouput.

**![Graphical user interface, application

Description automatically generated]()**

**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**

[1] Python Programming: Using Problem Solving Approach by Reema Thareja.

[2] <https://kivy.org/doc/stable/>