



Maharashtra Board of Technical Education, Mumbai.
Government Polytechnic, Solapur.



DIPLOMA IN COMPUTER TECHNOLOGY

Academic Year 2021-22.

A

MICRO-PROJECT REPORT ON

QR Code Generator

Submitted by

Roll No.	Enrollment No.	Student Name
68	1900150314	Ramakant Narayan Tati

S

Guide Name

Mr. Bhalerao sir

HOD

Mr. Tarange A. L sir

PRINCIPAL

Mr. Hunsimard S.K

CERTIFICATE

Certified that this Micro-Project Report

QR Code Generator

Is the work of

Roll No.	Enrollment No.	Student Name
68	1900150314	Ramakant Narayan Tati

The student of Semester five Subject Name-PWP (22519) Diploma in Computer Technology, 2020-21.

This report is partial fulfillment of subject PWP (22519) for the award of the Diploma in Computer Technology, By MSBTE, Mumbai.

Guide Name - Mr. Bhalerao sir

Date & Sign -

Guide Name

Mr. Bhalerao sir

HOD

Mr. Tarange A. L sir

PRINCIPAL

Mr. Hunsimard S.K

PART A – Micro-Project Report

QR Code Generator

1.0 INTRODUCTION:

Nowadays we all use QR code for Multiple purposes like making payments, sharing Wi-Fi, etc. Have ever wished to generate such QR code on your own? We are here with a project for QR generator using python.

QR Code is a machine-readable matrix barcode that uniquely represents information. With the increase in optical capabilities of smartphones, the use of QR codes started increasing.

2.0 Aim of the Micro-Project

This Micro-Project aims at:

1. To develop our programing skills.
2. To Learn How the QR code is generates using python
3. To make convenient for everyone

3.0 Intended Course Outcomes

1. Handle the Exception in python
2. Develop functions for the given problem

4.0 Literature Review

QR code refers to Quick Response Code which was invented by a Japanese automotive company in 1994. QR code is a type of Matrix barcode that is a machine-readable optical label that contains information about the item to which it is attached.

5.0 Proposed Methodology

First, I start to develop structure of our project. After that I started to developing Stopwatch **project** in JavaScript. After developing the simple interface then move ahead for the JavaScript coding then added Cascading Style Sheet to this project for beautiful interface of our project.

6.0 Resources Required

S. No.	Name of Resource/material	Specifications	Qty	Remarks
1	Laptop	Core i3 window 10 6GB RAM	1	1
2	Jupyter Lab	-	1	1
3	Chrome Browser	-	1	1

7.0 Action Plan

S. No.	Details of activity	Planned Start date	Planned Finish date	Name of Members
1	Topic Selection	20/4/2022	21/4/2022	Ramakant Tati
2	Research on Project	22/4/2022	25/4/2022	Ramakant Tati
3	Development of Project	26/4/2022	01/5/2022	Ramakant Tati
4	Documentation on project	5/5/2022	10/5/2022	Ramakant Tati

PART B – Micro-Project Report

QR Code Generator

1.0 INTRODUCTION:

We will be using Tkinter and pyqrcode and os modules in Python to build this project. We use the Tkinter module to build the GUI , pyqrcode module for generating QR code and OS module for saving the generated code in directory

2.0 Course Outcomes Addressed

- Handle Exceptions.
- Develop Functions.
- achieved user-friendly Python application.
- Studied some new python modules

3.0 Literature Review

QR code refers to Quick Response Code which was invented by a Japanese automotive company in 1994. QR code is a type of Matrix barcode that is a machine-readable optical label that contains information about the item to which it is attached.

4.0 Actual Methodology Followed

- Gathered information about the project
- Consulted with project design
- Noticed project associated videos on YouTube, Google
- Started building application
- Developed the project report for it.

5.0 Skill Developed / learning out of this Micro-Project:

By performing this project, the lead character is developed in us. I also discovered how to improve the project with the help of an instructor. From this, I also discovered how to perform the Python modules and how to generate

QR code in python language. I further learned Building the description and studied some new python modules.

6.0 Applications of this Micro-Project

1. Download apps with QR code
2. Send link in QR format
3. send emails and messages in QR code format
4. Share location in QR code format

7.0 Area of Future Improvement:

By changing the program, we can change the GUI of application and we will add some advance features in this application

Index

Sr. No	Title	Page No.
1.	Acknowledgement	
2.	Introduction	
3.	Introduction to Firebase	
4.	Design outputs	
5.	Program code	
6.	Reference	
7.	Conclusion	

Acknowledgement

At the beginning we have taken the guidance of our lecturer. **Mr. Bhalerao sir** and because of their guidance we can complete our Micro-Project, successfully. We are also thankful, to our all-group members to enhance their own ideas to us for support project. It was an enthusiastic support and atmosphere that made us sustain from demotivation during the completion of our project we would also like to thank the principal, himself has been source of motivation and encouragement.

Finally, we are also thankful to our Computer Department who has always been supportive whenever we needed help and we also thank our friends who have helped does a lot Thank You.....!

INTRODUCTION

Nowadays we all use QR code for Multiple purposes like making payments, sharing Wi-Fi, etc. Have ever wished to generate such QR code on your own? We are here with a project for QR generator using python.

QR Code is a machine-readable matrix barcode that uniquely represents information. With the increase in optical capabilities of smartphones, the use of QR codes started increasing.

QR code refers to Quick Response Code which was invented by a Japanese automotive company in 1994. QR code is a type of Matrix barcode that is a machine-readable optical label that contains information about the item to which it is attached.

CONTENT

1. What is QR code?

QR codes are machine readable two-dimensional pixelated barcodes which can be used to store a variety of information. QR in *QR code* stands for *Quick Response*.

QR code was invented by a Japanese engineer *Masahiro Hara* from automobile manufacturer Denso Wave in the year 1994 to track the movement of car parts. QR Code has increased in popularity in the later 2010s with improvement in optical capabilities of mobile phones and their wide adoption.

2. Python qrcode Module

Python has a library “pyqrcode” for generating QR code images. It can be installed using pip.

```
pip install pyqrcode
```

3. Python OS Module

It is possible to automatically perform many operating system tasks. The OS module in Python provides functions for creating and removing a directory (folder), fetching its contents, changing, and identifying the current directory, etc. It can be installed using pip.

```
pip install os
```

4. Python tkinter Module

Tkinter is the Python port for **Tcl-Tk GUI toolkit** developed by Fredrik Lundh. This module is bundled with standard distributions of Python for all platforms. It can be installed using pip.

```
pip install tkinter
```

PROGRAM CODE

```
from tkinter import *
import os
import pyqrcode
from tkinter import messagebox

window = Tk()
window.title("QR Code Generator")
window.configure(bg='#826CB2')
window.geometry('600x420')
f = ('Times', 14)

def generate():
    if len(Subject.get())!=0 :
        global qr,photo
        qr = pyqrcode.create(Subject.get())
        photo = BitmapImage(data = qr.xbm(scale=5))
    else:
        messagebox.showinfo("Please Enter some Subject")
    try:
        showcode()
    except:
        pass

def showcode():
    imageLabel.config(image = photo)

def save():
    dir = os.getcwd() + "\\QR Codes"
    if not os.path.exists(dir):
        os.makedirs(dir)
    try:
```

```

    if len(name.get())!=0:
        qr.png(os.path.join(dir,name.get()+".png"),scale=8)
    else:
        messagebox.showinfo("Please enter a File Name")
except:
    messagebox.showinfo("Generate the QR code first!")

window.columnconfigure(0, weight=1)
window.columnconfigure(1, weight=2)

left_frame = Frame(window, bd=2, bg='#D2CAE3', relief=SOLID, padx=10, pady=10)

head = Label(left_frame, text="QR Code Generator", bg='#D2CAE3', font = "Helvetica 15
bold italic")
head.grid(row=0,column=1,)

Label(left_frame, text="Enter Subject", bg='#D2CAE3',font=f).grid(row=1, column=0,
pady=10)
Label(left_frame, text="Enter FileName", bg='#D2CAE3',font=f).grid(row=2, column=0,
pady=10)

Subject = StringVar()
SubEntry = Entry(left_frame, textvariable = Subject)

name = StringVar()
nameEntry = Entry(left_frame, textvariable = name)

button = Button(left_frame, width=10, text='Generate QR', font=f, relief=SOLID,
cursor='hand2',command = generate)
saveB = Button(left_frame, width=10, text='Save QR', font=f, relief=SOLID,
cursor='hand2',command = save)

imageLabel = Label(left_frame, bg='#D2CAE3')

```

```
SubEntry.grid(row=1, column=1, pady=10, padx=20)
nameEntry.grid(row=2, column=1, pady=10, padx=20)
```

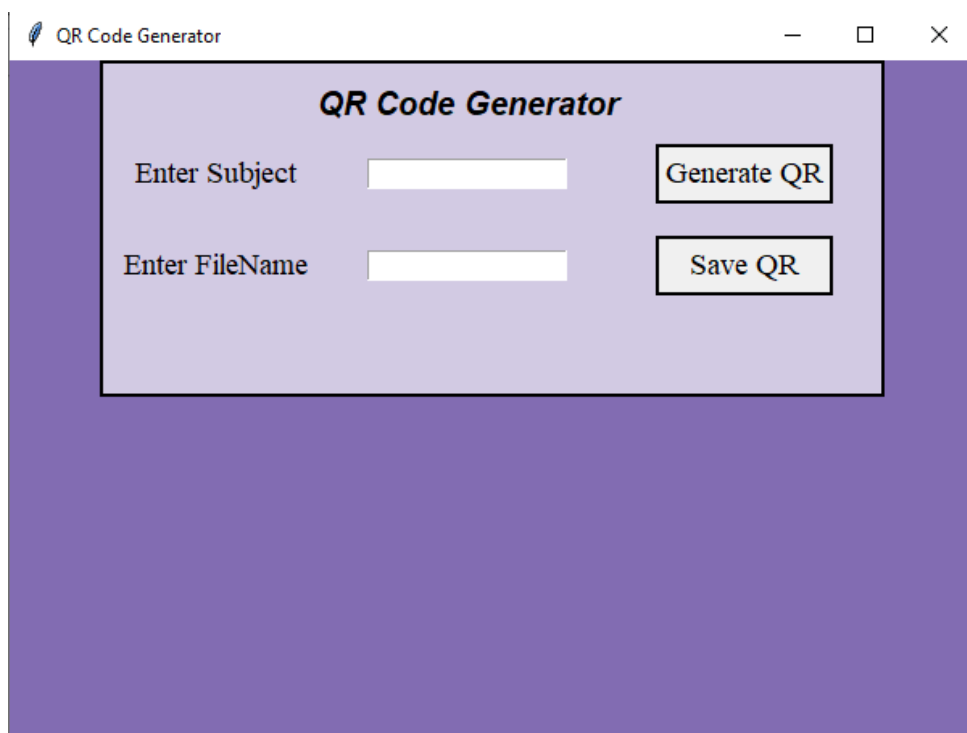
```
button.grid(row=1, column=2, pady=10, padx=20)
saveB.grid(row=2, column=2, pady=10, padx=20)
```

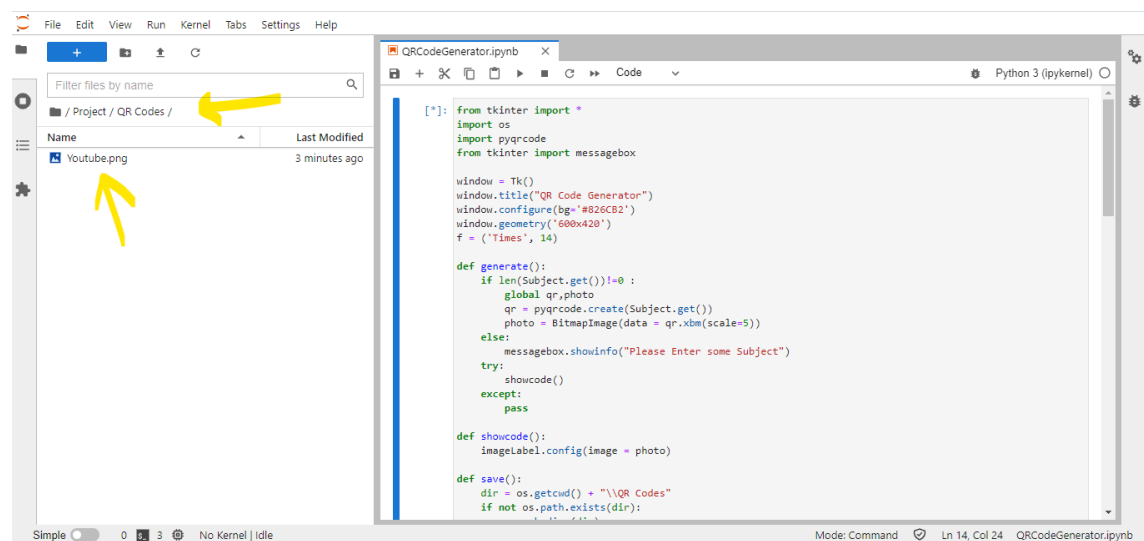
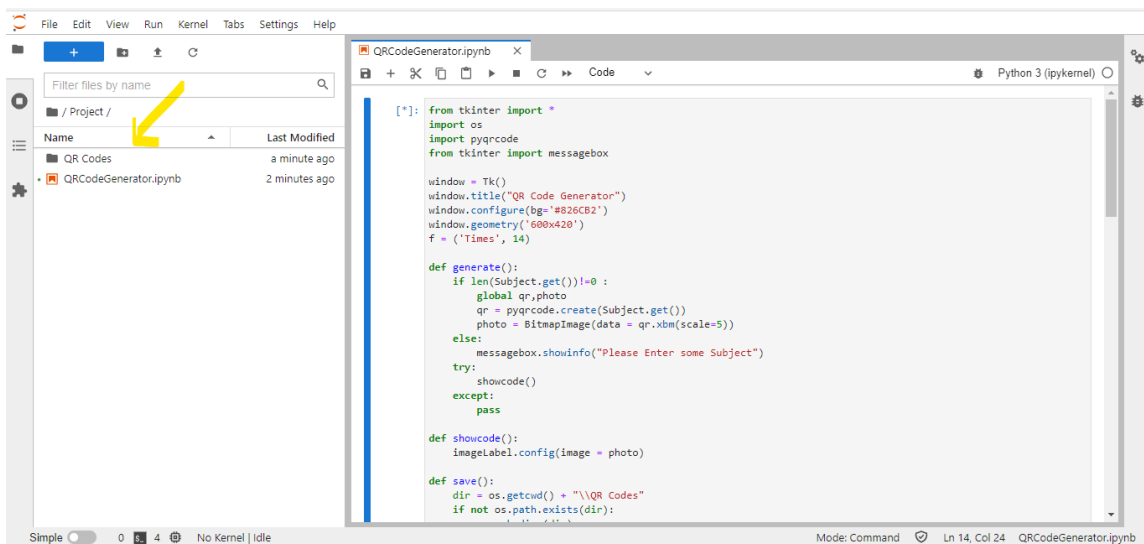
```
imageLabel.grid(row=3, column=1, pady=10, padx=20)
```

```
left_frame.pack()
```

```
window.mainloop()
```

OUTPUTS





CONCLUSION

By doing this project I've learnt about some new python modules. Now I know how to use different python modules in project, and I learnt about python tkinter.

REFERENCE

1. <https://www.youtube.com/>
2. <https://www.pytho.org/>
3. <https://www.google.com/>