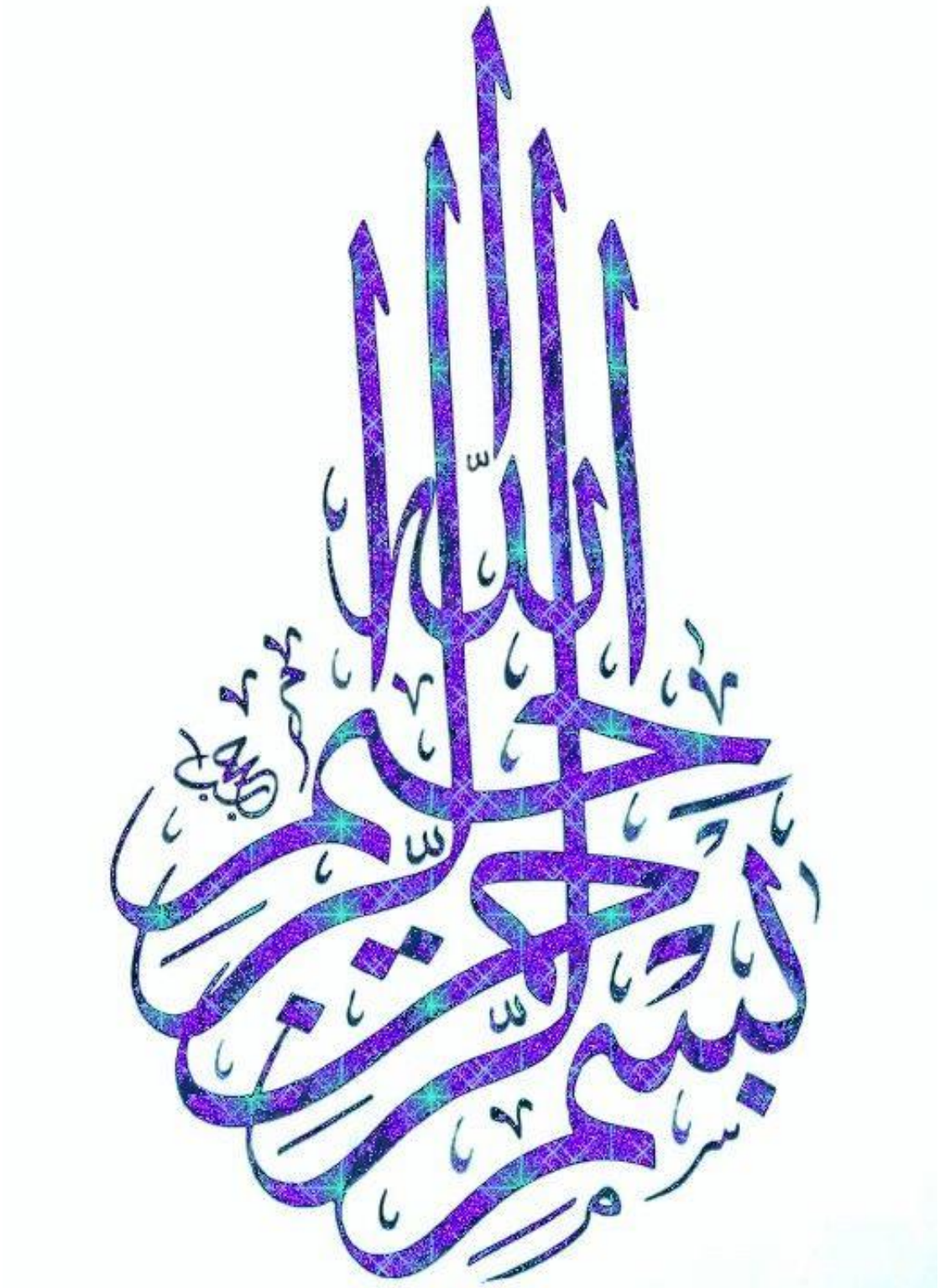
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QR Code Generator and Reader in Python

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Table of Contents

Abstract

This project is about QR code Generator and Reader in Python. In this modern world, QR code is an easy way to download an app, go to an landing page or doing an transaction just by one scan.

QR(Quick Response) codes are two-dimensional barcodes that can land you to an online destination such as a website or download link. They are essentially hyperlinks in form of image. We have seen them inside magazines and newspapers or at the top of business cards.

QR code is capable to store up to 7089 digits or 4296 characters, including punctuation marks and special characters, the Code can equally encode words and phrases such as internet addresses.

Since Smartphones hit the market, QR Codes become very popular as a vital component of every self-respecting advertisement, product, company, app or coupon discounts.

QR Codes are easily scannable codes that redirect the scanner to a destination of the creator’s choice, are used in numerously ingenious fashions and are an incredibly useful tool for making your product, company or site, accessible and engaging in a creative manner.

Chapter 1 Introduction

Introduction to Project

"QR code Generator and Reader" is an python based project that allow users to create QR codes for data like number, text, links or app. All they need to change the data predefined in program.

Program will automatically generate an QR code for input data in same folder

Need of our project

QR codes are important in this modern world because :

- it create actionable and measurable media.
- it spread visual marketing and brand information.
- it helps to share engaging multimedia content.
- it provide directions locations.
- it lead the audience to long-form content.
- it modernize financial transactions.
- it secure tickets.
- QR codes remain relevant.

Aims and Objectives

The main aim of the project is to provide users such tools so that they can easily create QR codes in very less time. They

can easily create QR codes with its simple method of entering data to required QR codes.

The main objective is to make the QR code Generation very simple and time saving. Users just need to enter/change data and run the program QR code will be generated automatically.

Benefits of project

The benefits of project are:

- Simple method of creating QR codes.
- More QR codes can be generated in less time.
- The process is very time saving.
- Users can also read QR codes.
- Anyone having basic computer knowledge can generate and read QR code.

Overview

“QR code Generator and Reader” is a python project that generate and read QR codes for user for any data they want. We have developed such program that can generate and read just by some clicks.

Tool Used in this Project

- Python IDLE 3.8
- Anaconda, Jupyter Nootbook
- Libraries which are used are qrcode, pypng OpenCV and Pillow.

Chapter 2 Requirement Analysis

Existing System

In traditional way, people when need to visit a page, download an app or to do payment transactions, they often type the addresses of that pages, which take time and difficult for users.

Proposed System

QR code Generator and Reader is a tool that can generate and read QR codes. For users, it will be very simple to create QR codes in very less time. If they have basic computer knowledge the can use this program. All they need is to change data for QR code to be generated and run the program, QR code will be generated.

Software Requirement Specification

Introduction:

The SRS document presents a detailed description of the QR code Generator and Reader System that we are developing for QR code generation and reading. The SRS will discuss the system functionality regarding of generation of QR codes.

Purpose:

The purpose of this program to automate the digital services.

Following are the some problem of current system.

- Time consuming.
- Chances of fraud.
- Manual method.

Scope:

We want to make such system for users so they can easily create QR code automatically with very less time. No special skill or knowledge will be required for users to create QR code. Users with basic computer knowledge can easily create QR code automatically.

2.4 Types of Requirements

Two types of requirements are explained below:

Functional Requirements:

The functional requirements are:

QR code data:

Program will load data for QR code.

Create QR code:

Program will Create QR code with accurate data.

Change data:

Users will change data for QR code if they want.

Change Names of Output QR code image:

Users can change the names of Output image if they need to change it.

Output:

Program will successfully save required QR code image in same folder.

Non-Functional Requirements:

The non-functional requirements are:

Usability:

Any person having basic computer knowledge can use the program.

Accuracy:

Our System will be completely accurate.

Correctness:

Our will meet the specified requirements.

Implementation:

On any windows operating system with no accessories needed, program can be implemented.

Performance:

Program is very fast in processing.

Testing Program Screenshots

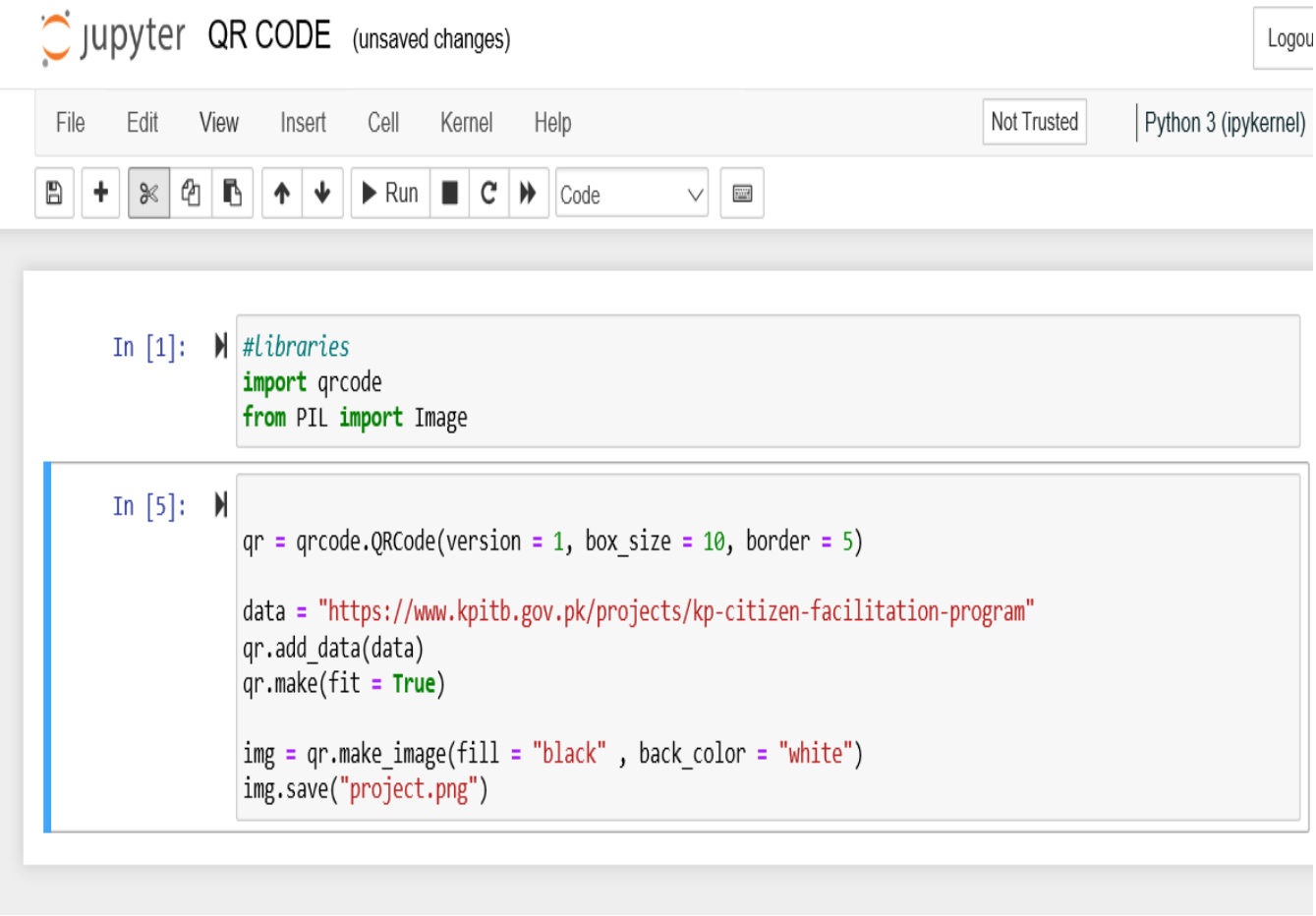

Figure 1: The above screenshot shows code for creating QR code

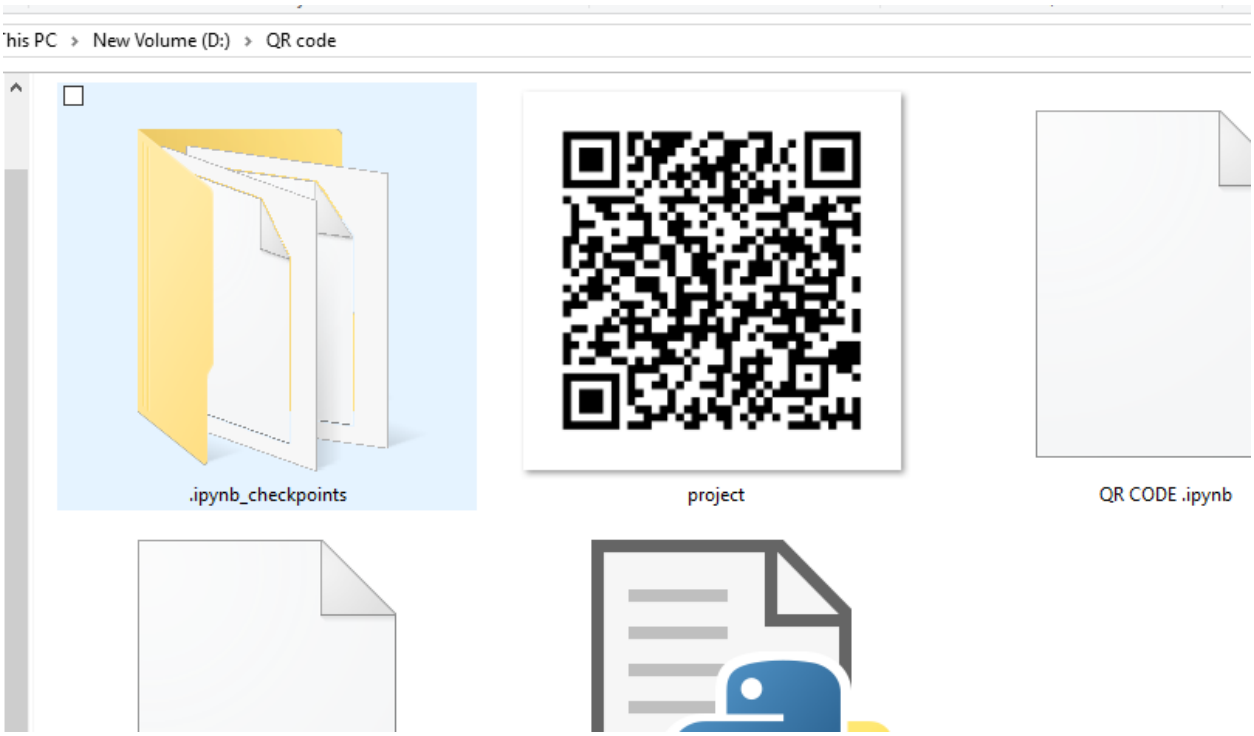

Figure 2 Above Screenshot shows the image of QR code just created

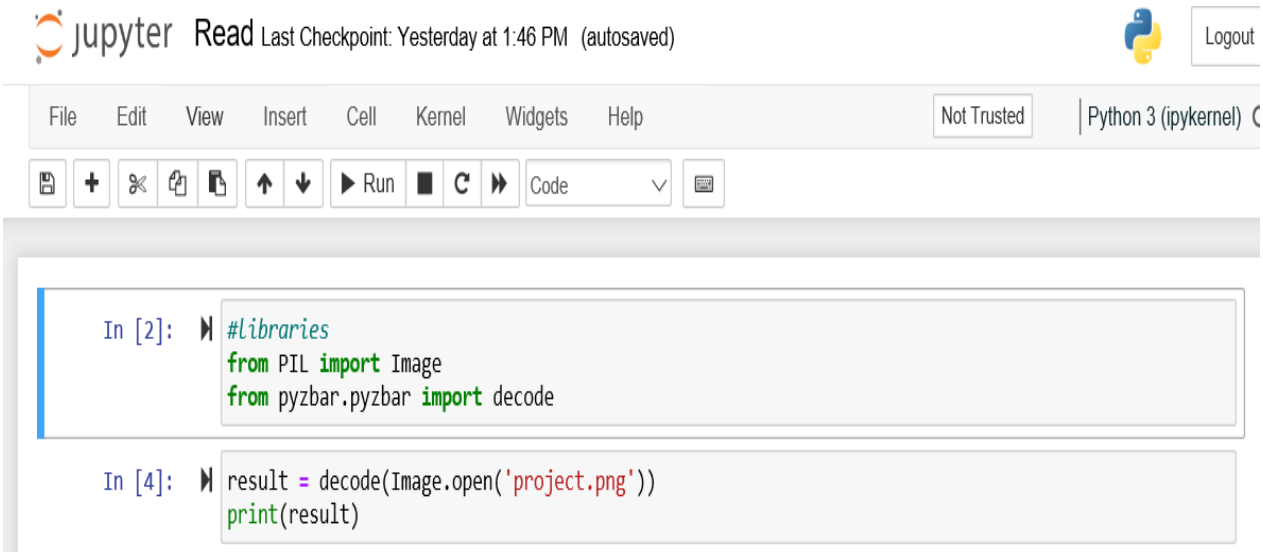

Figure 3 Above Screenshot shows code of reading QR code

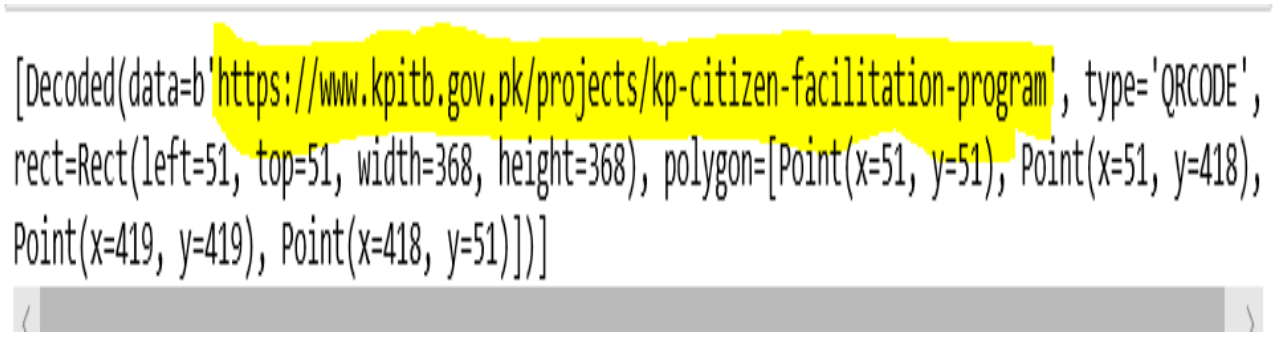

Figure 4 Above is Screenshot of output of QR code reading code