***PROJECT DOCUMENTATION***

PROJECT NAME: “QR CODE”

GROUP NO: 07

MEMBERS NAME:

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**WHAT IS QR CODE:**

QR code, short for Quick Response code, is a two-dimensional barcode that can store a large amount of information in a small space. It consists of black squares arranged on a white square grid, typically used for storing URLs or other information for reading by the camera on a smartphone or other devices.

**WHY WE CHOOSE QR CODE:**

There are several reasons why QR codes are commonly chosen for assignments and real-life applications:

* **Versatility**: QR codes can encode various types of data, including text, URLs, contact information, and more. This versatility makes them suitable for a wide range of applications, from marketing and advertising to inventory management and ticketing systems.
* **Ease of Use:** QR codes can be easily generated and scanned using smartphones or dedicated QR code scanners. This simplicity makes them accessible to a broad audience, including those without technical expertise.
* **Space Efficiency:** Despite their small size, QR codes can store a significant amount of data compared to traditional barcodes. This space efficiency is particularly useful when storing complex information or URLs with long strings of characters.
* **Interactive Content:** QR codes can link to multimedia content, such as websites, videos, or audio files, providing an interactive experience for users. This capability enhances engagement and allows for creative marketing campaigns or educational materials.

**IMPACT OF QR CODES IN REAL LIFE:**

The impact of QR codes in real life has been significant across various industries:

* **Retail and Marketing**: QR codes are commonly used in retail stores and marketing campaigns to provide product information, promotional offers, and discounts to customers. They enable quick access to additional details about products or services, facilitating informed purchasing decisions.
* **Contactless Payments:** QR codes play a crucial role in contactless payment systems, allowing customers to make payments by scanning a code with their smartphone. This technology has become increasingly popular, especially in regions where mobile payment adoption is high.
* **Healthcare and Authentication:** In healthcare settings, QR codes are utilized for patient identification, medication management, and access to electronic health records. They also serve as authentication mechanisms for secure login processes and document verification.
* **Supply Chain and Inventory Management:** QR codes facilitate inventory tracking, asset management, and supply chain logistics by providing a unique identifier for each item. They help streamline operations, improve accuracy, and enhance transparency throughout the supply chain.

Overall, QR codes have had a transformative impact on various aspects of our daily lives, offering convenience, efficiency, and versatility in accessing and sharing information across different contexts.

**REVIEW ABOUT COURSE:**

We are the student of CIT with python programming course in the BANO QABIL program 2.0 and we are having a great and wonderful time with learning and practicing the environment, the teacher, the academic and the administrator all are good with us and as a student I would recommend all of the karachities to come and make your future better and brighter with BANO QABIL IT TECHNOLOGY INSTITUTE and we give our big thanks to HAFIZ NAEEM UR REHMAN for giving us chance to make ourselves proud it all happened because he gave us a chance to proof ourselves and our nation in front of the world.

**REVIEW ABOUT BANO QABIL:**

“Bano Qabil 2.0 IT Institute" is an innovative and transformative educational institution that offers cutting-edge technology courses to empower individuals with the skills needed to thrive in the digital age. As a student at Bano Qabil 2.0 IT Institute, my experience has been nothing short of exceptional.

My experience at Bano Qabil 2.0 IT Institute has been incredibly enriching and rewarding. The institute's commitment to excellence, coupled with its supportive community and innovative approach to education, has equipped me with the knowledge, skills, and confidence to pursue a successful career in the tech industry. I am grateful for the opportunities provided by Bano Qabil 2.0 IT Institute and highly recommend it to anyone looking to embark on a journey of lifelong learning and professional development in the field of information technology.

**CODING:**

import qrcode  
from tkinter import \*  
from tkinter import messagebox  
  
*# Function to generate the QR code and save it*def generateCode():

*# Creating a QRCode object of the size specified by the user* qr = qrcode.QRCode(version=size.get(),  
 box\_size=10,  
 border=5)  
 qr.add\_data(text.get()) *# Adding the data to be encoded to the QRCode object* qr.make(fit=True) *# Making the entire QR Code space utilized* img = qr.make\_image() *# Generating the QR Code* fileDirec = loc.get() + '\\' + name.get() *# Getting the directory where the file has to be save* img.save(f'{fileDirec}.png') *# Saving the QR Code  
 # Showing the pop up message on saving the file* messagebox.showinfo("DataFlair QR Code Generator", "QR Code is saved successfully!")  
  
*# Creating the window*wn = Tk()  
wn.title('DataFlair QR Code Generator')  
wn.geometry('700x700')  
wn.config(bg='SteelBlue3')  
  
*# Label for the window*headingFrame = Frame(wn, bg="azure", bd=5)  
headingFrame.place(relx=0.15, rely=0.05, relwidth=0.7, relheight=0.1)  
headingLabel = Label(headingFrame, text="Generate QR Code with DataFlair", bg='azure', font=('Times', 20, 'bold'))  
headingLabel.place(relx=0, rely=0, relwidth=1, relheight=1)  
  
*# Taking the input of the text or URL to get QR code*Frame1 = Frame(wn, bg="SteelBlue3")  
Frame1.place(relx=0.1, rely=0.15, relwidth=0.7, relheight=0.3)  
  
label1 = Label(Frame1, text="Enter the text/URL: ", bg="SteelBlue3", fg='azure', font=('Courier', 13, 'bold'))  
label1.place(relx=0.05, rely=0.2, relheight=0.08)  
  
text = Entry(Frame1, font=('Century 12'))  
text.place(relx=0.05, rely=0.4, relwidth=1, relheight=0.2)  
  
*# Getting input of the location to save QR Code*Frame2 = Frame(wn, bg="SteelBlue3")  
Frame2.place(relx=0.1, rely=0.35, relwidth=0.7, relheight=0.3)  
  
label2 = Label(Frame2, text="Enter the location to save the QR Code: ", bg="SteelBlue3", fg='azure',  
 font=('Courier', 13, 'bold'))  
label2.place(relx=0.05, rely=0.2, relheight=0.08)  
  
loc = Entry(Frame2, font=('Century 12'))  
loc.place(relx=0.05, rely=0.4, relwidth=1, relheight=0.2)  
  
*# Getting input of the QR Code image name*Frame3 = Frame(wn, bg="SteelBlue3")  
Frame3.place(relx=0.1, rely=0.55, relwidth=0.7, relheight=0.3)  
  
label3 = Label(Frame3, text="Enter the name of the QR Code: ", bg="SteelBlue3", fg='azure',  
 font=('Courier', 13, 'bold'))  
label3.place(relx=0.05, rely=0.2, relheight=0.08)  
  
name = Entry(Frame3, font=('Century 12'))  
name.place(relx=0.05, rely=0.4, relwidth=1, relheight=0.2)  
  
*# Getting the input of the size of the QR Code*Frame4 = Frame(wn, bg="SteelBlue3")  
Frame4.place(relx=0.1, rely=0.75, relwidth=0.7, relheight=0.2)  
  
label4 = Label(Frame4,  
 text="Enter the size from 1 to 40 with 1 being 21x21: ",  
 bg="SteelBlue3", fg='azure', font=('Courier', 13, 'bold'))  
label4.place(relx=0.05, rely=0.2, relheight=0.08)  
  
size = Entry(Frame4, font=('Century 12'))  
size.place(relx=0.05, rely=0.4, relwidth=0.5, relheight=0.2)  
  
*# Button to generate and save the QR Code*button = Button(wn, text='Generate Code', font=('Courier', 15, 'normal'), command=generateCode)  
button.place(relx=0.35, rely=0.9, relwidth=0.25, relheight=0.05)  
  
*# Runs the window till it is closed manually*wn.mainloop()