!pip install qrcode[pil]

# Define the QR code generation function

import qrcode

from PIL import Image

def generate\_qr\_code(data, output\_file):

    """

    Generates a QR code for the given data and saves it as an image file.

    :param data: The data to encode in the QR code (e.g., URL, text).

    :param output\_file: The path to the output image file (e.g., 'qrcode.png').

    """

    # Create a QR Code instance

    qr = qrcode.QRCode(

        version=1,  # Version 1 means a 21x21 matrix

        error\_correction=qrcode.constants.ERROR\_CORRECT\_L,  # About 7% error correction

        box\_size=10,  # Each box is 10x10 pixels

        border=4,  # Border size of 4 boxes

    )

    # Add data to the QR code

    qr.add\_data(data)

    qr.make(fit=True)  # Adjust the size to fit the data

    # Create an image from the QR Code instance

    img = qr.make\_image(fill\_color="black", back\_color="white")

    # Save the image to a file

    img.save(output\_file)

    print(f"QR code generated and saved as {output\_file}")

#Generate and display the QR code

# Example data to encode

data = input("Enter the data to encode in the QR code: ")

output\_file = "qrcode.png"

# Generate the QR code

generate\_qr\_code(data, output\_file)

# Display the generated QR code

from IPython.display import Image as IPImage

IPImage(output\_file)