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**Project Title** : **QR Code Generaion using GEN AI**

**ABSTRACT:-**

QR Code Generator with Customization and Logo Embedding is a Python-based project aimed at providing a flexible and feature-rich solution for generating QR codes. The project offers functionalities for both basic QR code generation and advanced customization, including logo embedding.

At its core, the project leverages the `qrcode` library to generate QR codes according to ISO/IEC 18004:2015 standards. Users can encode various types of data, such as URLs, text, or alphanumeric data, into QR codes with adjustable parameters like size, error correction level, and color scheme.

One of the key features of the project is the ability to customize QR codes by introducing noise, distortion, and varied block sizes, creating synthetic QR code-like images. This customization enhances QR code security and robustness by introducing elements that make the QR codes resistant to tampering and scanning errors.

Moreover, the project supports logo embedding, allowing users to incorporate logos or images into QR codes to align with branding requirements. This feature adds visual appeal to the QR codes, enhances brand recognition, and maintains consistency across marketing materials.

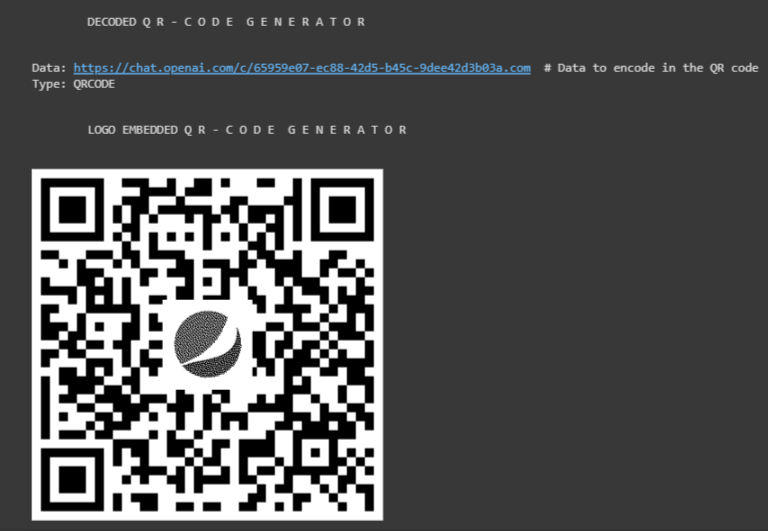
Additionally, the project facilitates batch QR code generation, enabling users to create multiple QR codes simultaneously. This capability streamlines tasks such as ticketing, inventory management, and promotional campaigns where generating QR codes in bulk is necessary.

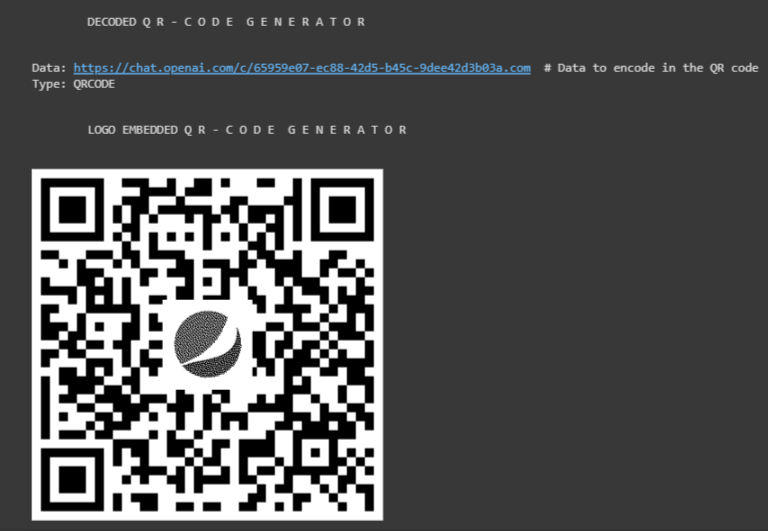
Furthermore, the project includes decoding functionality, allowing users to decode QR codes and extract encoded data from images. By incorporating the `pyzbar` library, the project enables seamless QR code decoding, supporting various data types and formats.

Overall, the QR Code Generator with Customization and Logo Embedding provides a comprehensive solution for QR code generation, customization, and decoding, catering to diverse use cases ranging from marketing and branding to logistics and information dissemination.

**SAMPLE OUTPUT:**

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