MSCS-633: Hands on Assignment-2: Report: QR Code Generator

Sandesh Pokharel

University of the Cumberlands

MSCS-633 Advance Artificial Intelligence

Dr. Primus Vekuh

May 18, 2025

1. Introduction

This report presents the implementation of a QR Code Generator using Python, completed as part of the Advanced Artificial Intelligence (MSCS-633-A01) course at the University of the Cumberlands. The project takes user input for a URL and generates a QR code image dynamically, while allowing the user to choose the output filename or use an autogenerated one. The implementation is interactive, well-documented, and robust, with features such as error handling and dynamic filenames.

2. Features Implemented

- Accepts user input for URL and filename

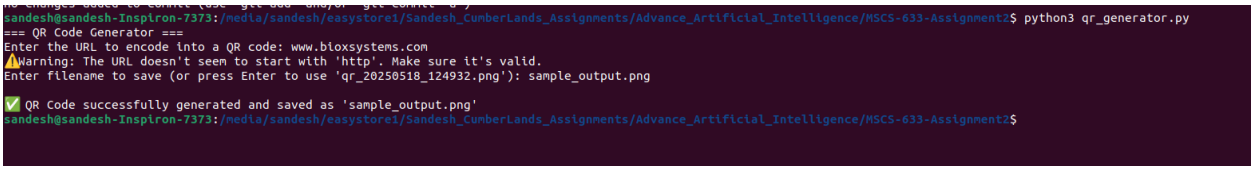
- Generates QR codes with dynamic timestamp-based filenames

- Fully commented code (program, function, and line levels)

- Includes error handling for robustness

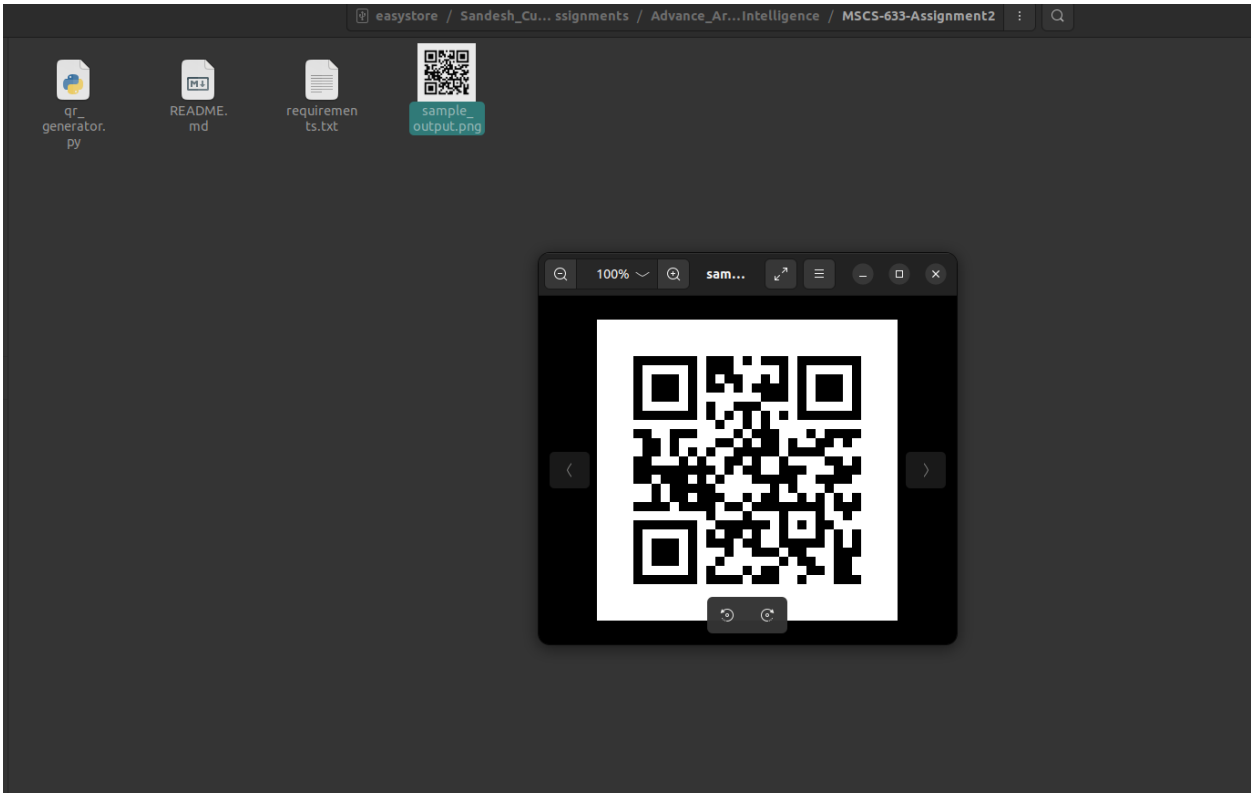
- Output saved as an image file

3. Screenshot of Code Execution



Screenshot: `execution_screenshot.png`

4. Screenshot of QR Code Output



Screenshot filename: `sample_output.png`

5. GitHub Repository

The complete project source code and documentation are available at the following GitHub repository:

🔗 https://github.com/sanspokharel26677/MSCS-633-Assignment2

6. Files Included

- `qr_generator.py`: Python source code

- `requirements.txt`: Manifest file listing dependencies

- `README.md`: Project documentation and usage instructions

- `execution_screenshot.png`: Screenshot of terminal execution

- `sample_output.png`: Generated QR code image

7. Conclusion

This project demonstrated how a simple but practical AI application like QR code generation can be implemented using Python. With user interactivity, validation, and clear documentation, the application is user-friendly and fulfills all assignment requirements. Screenshots and code are included to illustrate the working solution.