

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

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MSCS-633 Advance Artificial Intelligence

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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

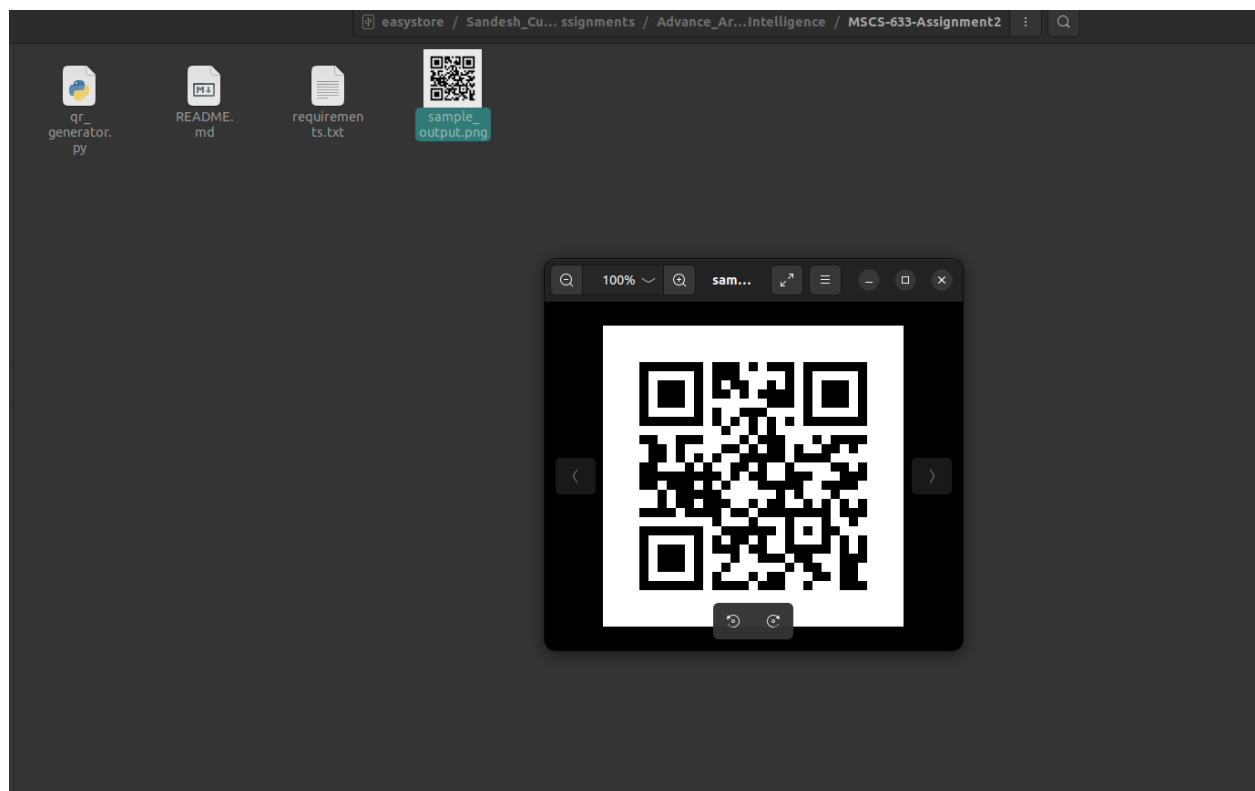
- Accepts user input for URL and filename
- Generates QR codes with dynamic timestamp-based filenames
- Fully commented code (program, function, and line levels)
- Includes error handling for robustness
- Output saved as an image file

3. Screenshot of Code Execution

```
no changes added to commit (use "git add" and/or "git commit -a")
sandesh@sandesh-Inspiron-7373: /media/sandesh/easystore1/Sandesh_CumberLands_Assignments/Advance_Artificial_Intelligence/MSCS-633-Assignment2$ python3 qr_generator.py
=== QR Code Generator ===
Enter the URL to encode into a QR code: www.bloksystems.com
Warning: The URL doesn't seem to start with 'http'. Make sure it's valid.
Enter filename to save (or press Enter to use 'qr_20250518_124932.png'): sample_output.png
✓ QR Code successfully generated and saved as 'sample_output.png'
sandesh@sandesh-Inspiron-7373: /media/sandesh/easystore1/Sandesh_CumberLands_Assignments/Advance_Artificial_Intelligence/MSCS-633-Assignment2$
```

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.