**GIT HUB REPO LINK:** <https://github.com/SamuelSudeepAyyala/user_management>

**Learning Outcomes:**

* I have gained good hands on experience with building API using fastAPI along with things like request handling, dependency injection, middleware integration.
* Learned about implementing RESTful endpoints following industry standards like HATEOS BREAD.
* Learnings about how to design and implement normalized relational database schemas using SQLAlchemy ORM.
* Learned to manage the asynchronous database sessions with AsyncSession and connection pooling.
* Explored how the querying works using SQLAlchemy like joins, filters and paginations.
* Learned how to use Pydantic models to validate the API input and serialise database responses into JSON.
* Implementing QR code generation using qrcode library using custom parameters like encoded and decoded information.
* Encoding user data securely using base64 and integrating it to the QR codes.
* Implementing BREAD HATEOS principles, provides the self descpritive links for navigation.
* Tackled complex issues like base64 handling, managing database transactions, aligning SQLalchemy models with pydantic schemas.
* Improved my analytical skills by debugging intricate tracebacks and resolving the issues raised while testing.
* Conducting manual testing for the API endpoints to ensure if they are behaving the expected way in different scenarios.
* Simulating real world scenarios including QR code scanning and invalid input handling.

**Features Addressed:**

[🎫 QR Code Generation User Invites with Minio](https://github.com/SamuelSudeepAyyala/user_management/issues/3)

I have made the project involving implementing of an invitation system using FastAPI with QR code generation, which is (**QR Code Generation User Invites with Minio**) a feature from the given list along with user tracking, and integration with MinIO for file storage. My project will allow users for the creation, management, and tracking of the user invitations via QR codes with features like sending invitations, accepting invitations.

[👤 User Profile Management](https://github.com/SamuelSudeepAyyala/user_management/issues/9)

The Second feature I have done is **User Profile Management** in which users can update their profile fields such as name, bio, location etc along with the upgradation of the users to managers or admins to upgrade their professional status. I have enhanced the user profile page to display the user professional status by allowing users to view and edit their profile.

**Issues Raised:**

[Bug Report - UserID is being passed as None in the verification URL](https://github.com/SamuelSudeepAyyala/user_management/issues/5)

[Bug Report - Nickname mismatch](https://github.com/SamuelSudeepAyyala/user_management/issues/6)

[Bug Report: Failure of Update User API](https://github.com/SamuelSudeepAyyala/user_management/issues/7)

[Bug Report: Null values for Github and LinkedIn URLS on update](https://github.com/SamuelSudeepAyyala/user_management/issues/8)

[Bug Report: Error While Installing libc-bin in Docker Build](https://github.com/SamuelSudeepAyyala/user_management/issues/1)

**Deployment to DockerHub:**

Please find the below link to access the DockerHub Repo:

<https://hub.docker.com/repository/docker/samuelsudeepayyala/user_managerment>

**Coverage Test cases Improvement:**

I have added 10 New Test cases to be added into the code. To verify the updated features and the existing code to increase the coverage.