Midterm Activity – Social Coding Midterm Project

## Social Coding Selection

Select a social coding project application for your team from the below options:

* Option 2: Adapting the Lab 4.9.2 python framework to integrate GPT-3/GPT-4 REST API [Level of difficulty: ++++]

1. **What were the reasons your team selected this option?**

I selected Option 2 because I wanted to challenge myself by integrating OpenAI's GPT-3/GPT-4 REST API instead of working with a fixed map-based application. This option gave me the opportunity to explore real-world use of AI, understand RESTful API integration, and build a fully interactive experience using terminal-based Python development.

1. **Describe your team's project application and its deliverables. What are the specific objectives of this application?**

My project is titled **"GPT Adventure — Interactive Story Builder"**, a terminal-based Python application that leverages the OpenAI GPT-3.5 API to create dynamic, user-driven storytelling experiences. The user begins by selecting a language and genre (such as fantasy or sci-fi), then interacts with the system by typing prompts or actions. The GPT model acts as a narrator, responding with vivid, immersive story segments in real time.

**Deliverables include:**

* A secure Python application using environment variables for the API key
* A continuous conversation loop with support for multiple genres and languages
* A narrator-style storytelling mode powered by GPT
* A chapter system that segments the story every 10 turns
* Built-in commands like /help, /restart, /save, and /quit
* Automatic logging of the story to a story\_log.txt file for playback or export

**Objectives of the application:**

* Demonstrate how RESTful APIs (like OpenAI's) can be integrated into a command-line Python app
* Simulate a text-based game using natural language interaction
* Adapt Lab 4.9.2’s API-based design to a creative, modern application
* Reinforce best practices in API key management, user input handling, and modular coding

1. **Record your team member roles and skillsets**

|  |  |
| --- | --- |
| Team member | Role/Knowledge/Skillset |
| Maya Boatgoz | Solo Developer – Python, REST APIs, GitHub, Documentation |

## Strategy/Project Plan

1. **Provide a brief description of your team’s strategy for completing this project.**

I started by analyzing the structure of Lab 4.9.2 which used a routing API and terminal-based input/output. Then, I designed a GPT-based chatbot using a similar loop and parsing structure. I followed best practices like using environment variables for security and added commands to simulate a text-based game. I tested each feature incrementally and kept the code organized and readable.

1. **What is the link to your GitHub repository?**

<https://github.com/Software-Engineering-8-8-8-8-Squad/12220266>

1. **Describe how GitHub was used to:**
2. Create branches (in the context of this project)

**GitHub was used to:**

* Track all project progress and commits
* Push code and updates securely
* Store README, .py files, and documentatio

1. Add team members (and their branches/commits)

This was an individual project, so I didn’t add team members. However, I used clear and descriptive commit messages to document progress and changes.

1. Mention pull requests, code review, merge, etc. (in the context of this project)

## Although working solo, I used pull requests to simulate code review before merging changes into the main branch. This helped ensure that each development stage was tested and complete before final integration.

### Presentation

Create a presentation about the project you selected. Your presentation should include:

* Information about your application, covering what features your team included
* The reasons that your team decided on these specific features in your application
* Application code including comments and documentation. Your comments and documentation should be sufficient for any other team to be able to continue the project if required. Another team should be able to understand the application, your features and how to continue with the project
* Demonstration of the application
* List of future enhancements (backlog)
* Reflection points – what issues have you faced while working on this activity, how did you find solutions, what have you learned, etc.