Networking Academy

Midterm Activity – Social Coding Midterm Project

Social Coding Selection

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

- Option 1: Feature enhancements of the Lab 4.9.2 code by adding user-friendly features to the MapQuest REST API [Level of difficulty: +++]
- Option 2: Adapting the Lab 4.9.2 python framework to integrate GPT-3/GPT-4 REST API [Level of difficulty: ++++]

What were the reasons your team selected this option?

We chose both options because we wanted to challenge ourselves by learning and experiencing APIs and AIs. Also, it was interesting.

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

1) Emoji routing. Emojis are added to outputs to make it easier to read and understand for users. For example: there are several turns in small distances, Gemini AI will recognize it as sharp turns and put a "warning" and "directions'" emojis, like "⚠️↘️".

2) AI powered tips based on route. For example: The route distance is very long, so Gemini AI will suggest to have check the traffics.

3) Natural Language Directions. Giving directions in a language that is more understandable by people.

4) Text-to-Speech Navigation. It converts written route instructions into spoken guidance for hands-free travel assistance.

5) Smart Multi-Stop Routing (Simple + Unique Add-ons) Basic Core:

User adds multiple destinations (A → B → C → D). Route is calculated for the full path.

Record your team member roles and skillsets

Team member	Role/Knowledge/Skillset
Nilufar Kurbonova	Facilitator. Software Programming
Javohir Sirojiddinov	Recorder. Python(Basics and AI), Front-End Coding
Datkaiym Tologonova	Team member. Problem-Solving, C/C++
Dilshod Obidov	Team member. Problem Solving, Python, Communication, Computer Vision

Strategy/Project Plan

Provide a brief description of your team's strategy for completing this project.

Our strategy was to divide all the new features we brainstormed among team members based on their strengths and interests. Each member was responsible for developing and testing their assigned features independently. We scheduled regular meetings to discuss progress, troubleshoot issues, and ensure that all components were compatible and seamlessly integrated into the final program. This collaborative approach allowed us to work efficiently while maintaining consistency and quality across the project.

Using GitHub for Collaboration

What is the link to your GitHub repository?
https://github.com/Nillufar/MapQuest

Describe how GitHub was used to:

a. Create branches (in the context of this project)

We created two main branches: main for stable code and master for ongoing development. Each team member also created their own feature branch to work independently, making individual contributions clear. Completed features were first merged into master, then into main for the final version.

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

Nilufar Kurbonova https://github.com/Nillufar/MapQuest/tree/nilufar

Datkaiym Tologonova https://github.com/Nillufar/MapQuest/tree/datkaiym

Dilshod Obidov https://github.com/Nillufar/MapQuest/tree/dilshod

Javohir Sirojiddinov https://github.com/Nillufar/MapQuest/tree/javohir

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

Team members were added as collaborators, working on their own branches and committing changes with clear messages. When a feature was ready, a pull request (PR) was opened for review. Team members checked the code, left feedback. Once approved, the branch was merged into main, and the feature branch was deleted to avoid clutter. This workflow ensured organized collaboration and maintained code quality.

Final Deliverables

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.