Define Objectives

Create a web-based map panel to show quantum safe gateway devices communication situation topographic.

Initial Objective

* Create a HTML iframe page (front-end) use free map API to show the gateway devices geo-location and data flow situation among them.
* Create a webpage server program (back-end) to parse the data from QSG-manager program and update the front-end webpage in real time.

**Job**

**Deliverables:**

1. Design a webpage to show the gateway devices communication status and situation topographic on a map.
   * Programming language: HTML, JavaScript
   * API used: Google Maps API
2. Design a back-End webserver program to accept the gateway data from the QSG-Manager and update the webpage.
   * Programming language: Python
   * API used: Flask, Jinja2
3. Create program development and environment setup documents.

**Evaluation Method:**

1. Being able to meet the required deadlines and workflow.
   1. Week 1: Improve the program develop and fixed what kind of API/Program language we will be used for the program development.
   2. Week 2: Pick up the related API and programming knowledge; create some simple test program during leaning.
   3. Week 3: Start programming and continues knowledge learning.
   4. Week 4-8: Program development for main features.
   5. Week 9-10: Program improvement and add new features.
   6. Week 11: Code optimization and program create test-case(optional)
   7. Week 12: Write program design and setup document.

**Technical Skill**

**Objectives:**

1. Show good understanding in using open-source API (Google Maps API, Flask, Jinja2).
2. Implement additional features which stretches beyond the required job deliverables.
3. Sustainable and easy to understand code.
4. Devise a set of test cases (Unit testing) to ensure correctness of code.

**Strategies:**

1. Invest time experimenting with open-source API (Week 2) and understanding the syntax.
2. Adhere to good coding practices. Conduct code check style regularly.
3. Write comments and documentations (if applicable) to explain code logics.

**Evaluation Method:**

1. Code reviews
   1. Organized and understandable code with little to no bugs.
   2. Sustainable code – Requires minimal maintenance once deployed.
   3. Good flow and logic in code.
2. Writes good test cases which covers corner cases and checks for potential bugs.
3. Alpha and beta testing of the final product to ensure software is implemented correctly.

**Office Soft Skill**

**Objectives:**

1. Able to discuss and propose several features to improve the current design of the project.
2. Able to explain the flow and logic of the code written in a clear and concise manner.
3. Being a team player consistently finding ways to contribute towards the project.
4. Motivated individual who works well and efficiently.

**Strategies:**

1. Raise up queries and clear any doubts before working on the project.
2. Prepare any necessary materials and documentations before any meeting.
3. Constantly seek ways to implement additional features which can help to improve the design of the project.

**Evaluation Method:**

1. GitHub contributions towards the project repository based on number of pull requests and lines of code (LOC).’
2. Clear program design and setup document.
3. Punctual in fulfilling deadlines and responsive to emails sent.
4. Online meetings with supervisors to present deliverables and explain code logic.