soeCampus Guide Requirements

1. Explore the campus map
    a. Support both SGW and Loyola campus maps
    b. Make shapes for the campus buildings, so that they are easily distinguished from the city buildings
    c. Be able to easily switch between the campuses (toggle button)
    d. Show the building I am currently located in
    e. Show additional information for each building (pop-up information)
2. Outdoor directions
    a. Be able to select a start and destination building (either by clicking on the building or by typing its name)
    b. Be able to have the building I am currently located as the start
    c. Show directions on the map (using Google API)
    d. Support directions from SGW to Loyola and vice versa
    e. Support multiple transportation ways (Walk, Car, Public transportation)
    f. Support for the Concordia Shuttle Service (time-aware and location aware)
3. Directions to my next class
    a. Connect to my Google Calendar
    b. Be able to select among multiple calendars (assume the calendar includes my courses)
    c. Find the location of the classroom from the next (upcoming) Calendar Event
    d. Generate directions to my next class (based on the current time)
4. Directions to my next class (**Alternative feature to #3**)
    a. Connect to Concordia Open Data API
    b. Find the schedules of my courses and their classrooms
    c. Generate directions to my next class (based on the current time)
5. Indoor directions (**This is the most critical and challenging feature**)
    a. Be able to locate rooms (start or destination points) in the Indoor maps for a specific floor
    b. Show shortest path directions
    c. Show directions for students with disabilities
    d. Highlight indoor points of interest (washrooms, water fountains, stairs, elevators)
    e. Be able to show directions between rooms in different floors
    f. Indoor directions from SGW to Loyola and vice versa (or from Building to Building in the same campus)
6. Outdoor Points of interest (restaurants, coffee shops, etc.)
    a. Show the nearest X (or based on a range) outdoor points of interest
    b. Show directions to a selected outdoor point of interest
7. Smart Planner (**Optional feature for Bonus marks**)
    a. Given a list of tasks (e.g., borrow a book from the library, make photocopies for some course notes, buy coffee/snack, attend a class, meet a friend in the campus) make a plan with directions that minimizes the total walking time and exposure to outdoor weather.
    b. Explore LLM APIs and prompting techniques (GPT, Gemini, Llama, Gemma) for generating the plan.

Notes: Features 3 and 4 are alternative. Only one of them should be implemented, but both of them should be researched regarding their feasibility.