Front End Development

1. Image of user’s current location is displayed
   1. Image selected from file based on parameters of location i.e. building or outdoors
   2. If outdoors, Google Maps?
2. If user selects search bar, then display...
   1. Keyboard?
   2. List of locations?
   3. ... and an “*Enter*” button
3. Event handler awaits “*Enter*” to be pressed, when it is, record user’s text/selection input
4. Send user’s desired destination and current location to server
5. Await response from server to provide best path
6. IF...
   1. User is outside
      1. Use Google Maps to navigate to nearest entrance of desired building
      2. Upon entering building, switch to indoor navigation mode to detail best path to destination
   2. User is inside but in a different building than destination
      1. Use indoor navigation mode to find best exit of building
      2. Switch to Google Maps to navigate to nearest entrance of desired building
      3. Upon entering building, switch to indoor navigation mode to detail best path to destination
   3. User is inside the same building as their destination
      1. Use indoor navigation mode to detail best path to destination
7. Display overall navigation with two buttons
   1. User selects “*Cancel*”
      1. Return to step 1
   2. User selects “*Begin*”
      1. Continue to step 8
8. Begin navigation based on step 6’s starting point, with “*Cancel*” button at bottom at all times
   1. User selects “*Cancel*”
      1. Return to step 1
9. Upon successful arrival at destination, display “*End*” button
10. Pressing “*End*” returns user to step 1

Back End Development

1. Server awaits connection from app
2. App sends a user’s current location and destination
3. Query database for relevant points between to locations
   1. i.e. All rooms in starting/ending buildings
4. Store room data in a node-based data structure
5. Use algorithms magic to determine best path
6. Respond to app with list ordered from beginning of path to end