Software Engineering Project Proposal (CS-360)

Project: Campus Navigator

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Problem: In universities with large campuses, one does not know the location of every auditorium, office or labs etc. Especially the freshmen and visitors find it extremely troublesome and laborious to find a particular venue. Taking LUMS as an example, getting lost in the academic block maze is the last thing you could afford before an important meeting or a morning exam.

Requirements: Build an application with the ability of navigation and path finding support that can guide user to reach a particular destination from a specified initial location. The navigational and path finding support of this application should not confined to the outdoor but must also provide a reasonable support for indoor destinations as well.

Our Proposed Solution: (Our solution is only for LUMS but with some appropriate data and changes it can be customized for any place full filling some requirements like Wi-Fi facility, and proper maps)

- We will develop an android application that will help you navigate through LUMS campus with indoor offices, auditoriums, discussions room location details.
- User will be presented with a map of LUMS with his \her location on it.
- User will specify his\her starting and destination location by selecting on map or by typing the names of locations (whether indoor or outdoor) and that application will give you the shortest and appropriate path.
- User's initial location can also be traced (through GPS if he\she is outdoor); in this case he\she will have to only specify the destination location.
- Because it's a course project with a limited amount of time so, we will only be implementing the indoor details for academic block and all other buildings of LUMS will be shown as block without any indoor details.
- In outdoor environment it will also provide with the current location of the user on the map while in "indoor" either we will take the user input or track his\her location through some technique (e.g. wireless router signal data/strength or mobile gyroscope etc.) and

will indicate the floor he\she is on in a multistory building.

- The path will also depend upon that whether you are male or female because there are certain locations in LUMS where males are not allowed to go.