

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	12 October 2022
Team ID	PNT2022TMID39365
Project Name	IoT based Safety Gadget for Child Safety Monitoring and Notification
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Detect Position	It should be able to detect continuously the current position of the user inside Politecnico di Torino hallways.
FR-4	Update Route	It is able to update the route (shortest) continuously according to detected position of user and dead ends. If encountered with a dead end the system can re-calibrate a new route to the end destination.
FR-5	Route Guidance	The mobile application communicates the route to the user through voice commands. It notifies of upcoming turns through hallways, doors, and upon arrival to end destination.
FR-6	Generating Route	According to the detected position of user inside a hallway and the specified end destination by the user (inputted as text or voice), the system generates a route between the 2 points according to the shortest path.
FR-7	Switch My Guide Cane ON/OFF	User is able to activate/deactivate the vibrating cane anytime during the usage of the system depending on the personal preference of the user.

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	My Guide implementation should be feasible using technologies that are accessible to the end-users.
NFR-2	Portability	The mobile interfaces must be compatible with Android.
NFR-3	Space Efficiency	The system allows for obstacle detection within the range of 1 meter.

NFR-4	Delivery	The language should be localized to the preference of the user.
NFR-5	Performance Efficiency	My Guide must perform in a proper time constraint that reflects average walking speed, motion and obstacles in the environment.
NFR-6	Multi User System	My Guide is able to consider the presence of more than one user in the same environment. All the features of the system should operate properly for all users.