

Functional Requirements

1. The web application shall use OpenStreetMap as the base to depict locations of interest. Priority 1
2. The web application shall have the ability to be launched from any web browser. Priority 1
3. The web application shall enable the user to enter the desired area for which they want to search for a gas station. Priority 1
4. The web application shall have an option that takes current location as the desired location. Priority 1
5. The web application should be able to detect continuously the current position. Priority 1
6. The web application shall give the user an idea of his location by showing a “You are here” label that clearly indicates where he/she is currently at. Priority 1
7. The web application shall let the user search for the type of gas station he/she is interested in. Priority 1
8. The web application shall present the exact location of the closest gas station of choice after selecting the appropriate result from the search results. Priority 1
9. The web application shall show the directions to the location with various routes the user can take. Priority 1
10. The web application should provide an auto complete feature that guesses the search terms (name of the gas station, gas type etc.) being typed by the user. Priority 1
11. The web application shall generate a route between the detected position of the user and the desired end destination of the gas station according to the shortest path. Priority 1
12. The web application should be able to recognize when the user is approaching the desired gas station area. Priority 1

Nonfunctional Requirements

1. The web application shall only support users whose device is turned on, has Internet connection and GPS capability.
2. The web application shall run within the Chrome browser on Android 6.0+ and Safari Mobile browser on iOS 12.2+. Priority 2
3. The web application shall provide all features to desktop as well as mobile devices. Priority 1
4. The web application shall support users who have 0.5 Mbits/sec upload speed. Priority 1
5. The web application shall operate with a preference of the English language. Priority 1
6. The web application's interface shall be responsive and adapt to screen resolution from 480x800 to 1920x1080. Priority 1
7. The web application shall respond in less than quarter a second Priority 1
8. The web application shall be readily used by all groups of users, even those with little training in information technology, after a short introduction of 10 minutes. Priority 1
9. The web application system server shall be immune to corruption of nonvolatile memory by power failure. Priority 1
10. The web application shall not be unavailable more than 1 hour per 1000 hours of functioning. Priority 1
11. The web application shall recover in under 15 seconds after a failure 95% of the time. Priority 1

*Priority is classified in a decreasing order, 1 being of utmost importance and 3 being optional.