

# Functional requirements

1. User shall query the Sports Recommender named Sportify.
  - 1.1. User must query the Sportify system by a specific address or by current location to confirm the departure location.
    - 1.1.1. Results for a query containing a specific address must report all locations relevant to that address in a drop-down list for the user to choose.
      - 1.1.1.1. User shall choose a location as the departure location.
      - 1.1.1.2. User shall report the issue or start another search if no wanted result.
    - 1.1.2. Results for a query about current location must indicate the user's location as the departure location.
  - 1.2. The Sportify system shall display some useful information for the departure location.
    - 1.2.1. Google Map shall return a specific map location as a snapshot based on the departure location.
  - 1.3. User must specify a search radius to determine the user reachable scope.
  - 1.4. User must choose a preferred mode of transport.
2. The Sportify system shall query the weather APIs to collect the weather information.
  - 2.1. The Sportify system shall query the 2-hour Weather Forecast API to collect the weather forecast.
  - 2.2. The Sportify system shall query the Ultraviolet Index (UVI) API to collect the UVI information.
  - 2.3. The Sportify system shall query the 2-hour Pollutant Standards Index (PSI) API to collect the PSI information.
  - 2.4. The Sportify system shall query the Air Temperature API to collect the air temperatures (Degree Celsius).
  - 2.5. The Sportify system shall query the Rainfall API to collect the real-time rainfall level in mm.
3. The Sportify system shall display all recommendation results within search radius.
  - 3.1. The Sportify system shall display results sorted by descending order based on final score.
  - 3.2. The Sportify system shall derive the result based on considering factors.
    - 3.2.1. Factors shall consider weather factors.
      - 3.2.1.1. Weather factors shall consider rainfall level.
      - 3.2.1.2. Weather factors shall consider Ultra-violet index (UVI).
      - 3.2.1.3. Weather factors shall consider Pollutant Standards Index (PSI).
      - 3.2.1.4. Weather factors shall consider the weather forecast information.
    - 3.2.2. Factors shall consider vacancy level of sports facilities inside the given radius.
    - 3.2.3. Factors shall consider distance information of the sports facilities from the departure location using the preferred mode of

transport.

- 3.3. Each result must display the following recommended information.
  - 3.3.1. Recommended information must contain the name of the sport facility location.
  - 3.3.2. Recommended information must contain the address of the sport facility location.
  - 3.3.3. Recommended information must contain the type of the sport activity.
  - 3.3.4. Recommended information must contain the distance based on the mode of travel.
- 3.4. Each result must offer a find out more button.
- 3.5. User shall click the button to see extra information of the recommended result.
  - 3.5.1. The extra information must contain the vacancy of the sport facility location.
  - 3.5.2. The extra information must contain the temperature of the sport facility location.
  - 3.5.3. The extra information must contain whether there would be a thunderstorm of the sport facility location.
  - 3.5.4. The extra information must contain whether there would be rain of the sport facility location.
  - 3.5.5. The extra information must contain the PSI of the sport facility location.
  - 3.5.6. The extra information must contain the UVI of the sport facility location.
  - 3.5.7. The extra information must show the reason why people is suitable to do the recommended sport under such weather condition.