# Project description

With the recent pandemic, most university students in Skopje struggle finding their way around town. The sedentary lifestyle that affects everyone has had the most impact on young adults as they try and navigate the waters of adulthood. With this website we aim to aid every student by providing a map of facilities that offer services which every student will find useful at one point or another.

Apart from the universities, the system aims to help find all locations in the city of Skopje where students can buy necessities such as supermarkets, grocery shops, bakeries, clothes shops, electronic and department shops, art centers, theaters, cinemas, nightclubs, pubs and bars, etc. For every location the app will store data about its name, address, coordinates, phone, website, opening hours, user rating on a scale of 1-to-5 and category of provided service.

The system will display an interactive map with all the points of interest marked as pins. There will be a sorting system which will only highlight a certain category (use of different colors) as well as a list showing the name, address, phone, website and working hours of the building. Each item will be searchable by their name or address, as well as by the utilities each place offers.

The data was taken from Open Street Maps using MyGeoData in order to take specific information about the infrastructure we plan to show on the web page. The data was later on processed using a Pipe and Filter code that we manually configured to return the data we wanted and wrote that data in a .csv file. Both the file and the code are attached with this document.

## Functional requirements

* The application shall be available in English.
* The application shall be responsive to user input.
* The application shall provide an appropriate user login page.
* The application shall have administrators and regular users as distinct user roles.
* The application shall allow administrators to add, edit information about, or remove institutions from the database.
* The application shall allow administrators to add or remove comments and ratings about the locations from the database.
* The application shall store and show data about institutions located in Skopje.
* The application shall allow any user to select a location.
* The application shall allow users to rate locations on a scale from 1 to 5.
* The application shall maintain a database of all the locations and information about them.
* The application shall provide an appropriate display of data related to the selected location.
* The application shall provide detailed information about a certain institution in a non-obtrusive pop up window.
* The application shall provide a title, address and category for every institution in the database.
* The application shall store appropriate additional information about institutions depending on the category it belongs to.
* The application shall provide working hours for any institution which has this information available.
* The application shall allow its users to zoom in and out of the displayed map.
* The application shall allow its users to filter the displayed institutions by choosing an option from a predefined list of categories in a drop-down list.
* The application shall allow its user to search for institutions by providing the entire or part of the institution’s name or address.
* The application shall allow an authorized user to leave a comment and/or rating about a certain institution.
* The application shall provide a help section containing detailed instructions of use.
* The application should display a list of facilities that are located near the previously selected location.
* The application shall allow an authorized user to compile a list of favorite locations for quick access.

## Non-functional requirements

* The defect rate of the system shall be less than 1 failure per 1000 hours of operation.
* The CPU usage shall not exceed 50% in a standard workload.
* The loading time of additional information about a location must not exceed 3 seconds.
* The application shall be able to support 5000 concurrent users 99% of the time.
* The application shall be accessible via any browser.
* The application shall be available in both a desktop and mobile version.
* The application shall meet or exceed 99.9% uptime.
* The application shall not be unavailable for more than 1 hour per 1000 hours of uptime.
* The application shall provide an interface which will require at most 10 seconds to complete an action.
* The application shall be designed with end users in mind so that it is intuitive to use.
* The application shall provide a virtual tour explaining its main functionalities.
* The application code shall be clarified with comments.
* The application code shall be written following standard naming conventions.
* The application architecture shall be designed following the [SOLID](https://stackify.com/solid-design-principles/) design principles.
* Installation of a new version of the application shall leave all database contents and personal settings unchanged.
* The application must be compliant with the latest HTML standards.