Functional And Non-Functional Requirements

# Functional Requirements

1. The system shall allow users to register with unique credentials.
   1. The system shall allow users to enter an email address.
   2. The system shall allow users to enter a password.
   3. The system shall allow users to enter an address.
2. The system shall keep the data of the registered users.
   1. The system shall be able to authenticate its users.
   2. The system shall allow access to user’s data only to authorized users.
   3. The system shall follow the law for the protection of personal data.
3. The system shall provide data and information about the fitness centers in Skopje.
   1. The system shall provide the name of the center.
   2. The system shall provide the address of the center.
   3. The system shall provide the telephone number of the center.
   4. The system shall provide the working hours of the center.
   5. The system shall provide a short description for the center.
   6. The system shall provide the distance from your location to the location of the center.
   7. The system shall provide a photo of the center.
   8. The system shall provide a location on map for the center.
4. The system shall be available on a stable web browser.
5. The software shall be supported on Microsoft .Net 4.8.
6. The system shall have the ability to be presented in one language
   1. The system shall be available in Macedonian.
7. The system shall inform the users about their registration via email.
8. The system shall have a search option.
   1. The system shall provide filter search.
9. The system shall provide an experience sharing and feedback section
   1. The system shall allow the users to write comments for each fitness center (answer questions).
   2. The system shall allow the users to leave reviews for each fitness center.
   3. The system shall allow the users to select a certain fitness center in their list of favorites.
10. The system shall provide technical support services for resolving any technical issues concerning the user’s accounts.
11. The system shall backup and store the recovered data in a network system.
    1. The system shall keep historical records as logging of the user events.
    2. The system shall ensure that system level accounts have limited privileges.

# Non-Functional Requirements

### Performance

* The system shall be able to process 10 user registrations at max per second in peak load.
* The system will work nonstop, and will consist of a local database
* The system shall be able to support at least 1000 simultaneous users. The capacity can be extended in the future if needed

### Reliability

* The system defect rate shall be less than 1 failure per 1000 hours of the operation that the user performs.
* No more than 1 per 10000 registrations shall result in a failure requiring a system restart.

### Availability

* The system shall be able to support a certain number of users at a time
* The system shall warn the user with an error message that the resource limits have been exceeded.
* The system shall redirect the user if the limit has been reached.
* Less than 30 seconds shall be needed to restart the system after a failure.

### Security

* The system shall support ASP.NET Identity authentication system.
* The system shall provide protection and encryption of sessions in relation with each other.

### Maintainability

* Installation of a new version of the software shall leave all database contents and all personal settings unchanged.
* The system shall not allow any method in any object to succeed 500 lines of code.

### Portability

* The time needed to replace the current relational database system with another one shall not exceed 2 hours at most, and no data loss should ensue.

### Software constraints

* The software of the system will rely on Microsoft ASP.NET Framework running version 4.8 or greater to function properly.
* The software will run on any of the given web browsers such as Mozilla Firefox, Google Chrome, Microsoft Edge as well as Avast Secure Browser.

### Hardware constraints

* Keyboard and mouse
* Monitor or another video display device (mobile, tablet)