ATSE (Advanced Techniques in Software Enginering)

Lab 3 (Requirements analysis and UML diagrams)



**CarMatch** - Requirements Analysis

Car Match should be a **web based solution** (accessible from a computer connected to internet) with the possibility to be complemented with a smart phone application)

Intially the system should be comprised from **2 functional modules** and should be extendible with new modules depending on the new requirements.

1. Develop a module that will hold information about members of **CarMatch** scheme

The system shall be capable to:

1.1. To register new members

1.2. To log in extisting members into the system (with registered account or with social account => Facebook, Google, Yahoo ID)

1.3. To list existing members by different constraints (location, number of rides offered, number of rides attended, etc)

1.4. Record and display the details of potential **car sharers** (i.e. ***vechicle owners***)

1.5. Store member social details (home and work address, e-mail and phone number and other informations - some mandatory, some optional)

1.6. Link to the social account of existing members (i.e. Facebook, Google Plus)

2. Provide a module that will match up members up with other members as car sharers

2.1. To match up members on the basis of geographical locations (.e.g ZIP codes of starting and destination locations) and travel times (start time, end time or duration). Detour implementation is optional.

- Offer a ride (only **car sharers** can do this): plan the ride (departure, destination, geographic mapping), reject/accepts join requests to the ride, cancel the ride

- Find / Look For a ride (**car seekers**): request join to a ride, cancel join to a ride

2.2. To manage details of arrangements

- Search for a ride

- Edit an existing ride (only by ride creator)

- Close a ride (if completed)

- Integrate with a mapping system (Google Maps)

2.3. To list rides by various criteria (rides in progress, rides completed, rides cancelled, rides with different kinds of feedback - i.e. good, bad, neutral; etc)

2.4. To provide feedback and support trust between ride participants

**Remarks:**

The area for possbile rides must cover at least Romania as a country.

The system should allow administrator membership seen as a super user and with moderator role.

Data persistence of the system can be implemented in any desired way as long as it provides the required support (i.e. relational database, cloud data store, etc).

**Identities and concepts:**

Car Sharer (vehicle owner)

Car Seeker (looking for existing rides)

Member (car sharer/seeker)

Vehicle (owned by car sharer)

Map (pin point locations departure, destination, intermediary locations)

Ride (offering, search for, join, request and reject, reservations)

Feedback (with rating)