Use cases

\subsection{Scenario (Sc01) }

Albert has an important appointment in Milan.

This meeting could provide a new customer to his company, so he has to do a good impression, arriving in time.\\

He arrived by train at 8.00 in the morning and the meeting is scheduled for 11.15, there is a lot of time, because the company is near the station, but he doesn't know where to go.\\

He is already a client of our app, because he travels a lot for work.\\

He sets up the initial point (using his current position) and the arrival point.\\

The path is very short, and there are no car/bike sharing near with him (the application doesn't provide them), but he doesn't go by foot not to sweat, so he disable foot option and decide to use the bus, which come closer to his arrival.\\

The application provides a link connection to the ATM site for reserving a ticket, and he uses it.

The total time of the travel is 30 minutes so he has to decide what to do during this time interval.

He has seen that there is a library near the company, it's only 5 minutes by foot, so he decides to set a break here that longs 3h, for review his presentation,

but this break requires too much time and, because of this, the software doesn't allow him, so he has to change it in only 2h.

There are no problems during the path and arrived at the library at 8.40.\\

At 10.40 the alarm related to the break rings, so he decides to leave the library and go to the company building.

Here he disable the app.

Visitor registration

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| Actors | Visitor |
| Goals | [G1] |
| Input conditions | The Visitor is on the home page. |
| Events flow | 1. The Visitor clicks on the “Sign in” button on the home page to start the registration process. 2. The Visitor fills all mandatory fields. 3. The Visitor clicks on the “Confirm” button. 4. The system saves the data. 5. The system sends a SMS to the new User with the password. |
| Output conditions | The Visitor ends the registration process successfully and become a new User. From now on he/she can log in to the application providing his/her credentials. |
| Exceptions | 1. The Visitor is already registered. 2. The Visitor inputs incorrect data in one or more mandatory fields. 3. The Visitor takes a username that has already been associated with another User. 4. The Visitor chooses an email that has already been in the system.   All exceptions are handled with notifying the issue to the Visitor and taking back to the point 2 of Events Flow. |

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| Actors | User |
| Goals | [G1] |
| Input conditions | The User is on the home page. |
| Events flow | 1. The User inputs his/her credentials into the “Username” and “Password” fields 2. The User clicks on the “Log in” button to get access. 3. The system redirects the User to his/her personal area. |
| Output conditions | The User gets access to his/her personal area successfully. |
| Exceptions | 1. The User inputs invalid Username. 2. The User inputs invalid Password.   All exceptions are handled with notifying the issue to the Visitor and taking back to the point 2 of Events Flow. |

\item (G02): The system allows User to set his/her route inside a city or a region

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| Actors | Client |
| Goals | [G2] |
| Input conditions | The client has already logged in. |
| Events flow | 1. The Client sets up the initial point using GPS localization. 2. The Client sets up the arrival point using GPS localization or specified address. 3. The Client checks if his/her current position and the arrival point has been correctly defined. 4. The Client clicks on the “Confirm” button. 5. The system builds the route. 6. The system offers the Client the ways in order of increasing their length. |
| Output conditions | The Client gets the set of routes to reach his/her destination. |
| Exceptions | 1. GPS is out of work. 2. The Client inputs the coordinates of initial and arrival point in different regions. 3. The Client’s current position cannot be defined correctly. 4. It’s impossible to build the route inside the city/region.     All exceptions are handled with notifying the issue to the Client and taking back to the point 1 of Events Flow. |

\item (G03): The system allows a User to choose a kind of transport among pre-defined travel means according to his/her preferences

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| Actors | User |
| Goals | [G3] |
| Input conditions | The User has the set of routes to reach his/her destination. |
| Events flow | 1. The User puts flags near his/her preferable travel means. 2. The User clicks on the “Confirm” button to save his/her choice. 3. If one of the chosen option is car, the system suggests the user to input the data of his/her driving license for the future using. 4. The system shows the User the list of available routes according to   his/her preferences |
| Output conditions | The User gets the set of the preferable routes |
| Exceptions | 1. There is no User’s preferable transport.   This exception is handled redirecting the User to the page of Technical support.   1. User chooses “car” option, but he/she does not have a valid driving license.   This exception is handled redirecting the User to Use Case 5.   1. User has not chosen any preferable transport.   All exceptions are handled with notifying the issue to the Client and taking back to the point 1 of Events Flow. |

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| Actors | User |
| Goals | [G3] |
| Input conditions | The User chooses a “car” option but he/she does not have a valid driving license. |
| Events flow | 1. The system offers the User to choose “taxi” option. 2. The User clicks on “Confirm” button to accept the offer. 3. The system shows the User the list of available routes according to   his/her preferences |
| Output conditions | The User gets the set of the preferable routes |
| Exceptions | 1. User rejects “taxi” option.   This exception is handled redirecting the User to the page of Technical support. |

\item (G04): Every user can decide the range of time to reserve for breaks.

\item (G13): The system must avoid overlaps in user's scheduled travels.

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| Actors | User |
| Goals | [G4] [G13] |
| Input conditions | The User has already logged in. |
| Events flow | 1. The system shows the User schedule of his/her meetings. 2. The User chooses a period of time between meetings. 3. The User clicks on the “Create a break” button. 4. The User sets up his/her break. 5. The User sets up the durability of his/her break. 6. The User clicks on “Confirm” button. |
| Output conditions | The User gets the schedule of his/her meetings. |
| Exceptions | 1. The User chooses invalid range of time given for a meeting. 2. The User does not choose the range of time for the break.   All exceptions are handled with notifying the issue to the Client and taking back to the point 2 of Events Flow.   1. The User does not input any data for the break.   The exception is handled with notifying the issue to the Client and offering to cancel the operation or take back to the point 4 of Events Flow.   1. The durability of the User’s break is too long and cross with the period of other meetings. 2. The User does not set up the durability of his/her break.   The exception 4 and 5 are handled with notifying the issue to the Client and taking back to the point 5 of Events Flow. |

\item (G10): The system must provide a way to permit to a single user to buy a ticket for public transports.

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| Actors | User |
| Goals | [G10] |
| Input conditions | The User chooses the route with using public transport except taxi |
| Events flow | 1. The system offers the User to buy a ticket for his/her trip. 2. The User clicks on the “Confirm” button. 3. The system redirects the User to ATM site (“buy ticket” page) |
| Output conditions | The User buys the ticket on ATM site. |
| Exceptions | 1. The User does not want to buy a ticket   The exception is handled with notifying about the issue and cancelling the operation.   1. ATM site does not work.   The exception is handled with notifying and redirecting to the Technical Support |

(G15): The system must inform the user about upcoming meetings.

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| Actors | User |
| Goals | [G15] |
| Input conditions | The User has a meeting in his/her schedule. |
| Events flow | 1. The system computes the path time. 2. The system sets up the timer to alert the User about upcoming meeting in the required time. 3. The timer works. 4. The user switches off the timer. |
| Output conditions | The User knows about the upcoming meeting. |
| Exceptions | 1. The User does not hear the alarm.   The exception is handled with re-alerting the User in 1 minute. |