Use Cases

for

Don’t Slip\*

**Version 1.0**

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**Team 6**

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Use Case List

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| ***ID*** | ***Primary Actor*** | ***Use Case Title*** |
| UC.1 | User | Route Searching |
| UC.2 | User | Login |
| UC.3 | User | Add a new marker to the database |
| UC.4 | User | View details of a marker/Vote on marker |
| UC.5 | User | Display current event markers within certain radius of user |
| UC.6 | User | Display historical markers within certain radius of user |

Use Case Template

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| --- | --- | --- | --- |
| Use Case ID: | UC.1 | | |
| Use Case Name: | Searching Route | | |
| Created By: | Clement Lee | Last Updated By: | Shang-Hung Tsai |
| Date Created: | 2/14/2016 | Date Last Updated: | 2/15/2016 |

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| --- | --- |
| Actors: | User |
| Description: | The user will enter the ending point (destination). The application will geolocate the user using the location tracking on their phone. The system will return a highlighted route with all the markers displayed from the user’s current location to the ending point. |
| Trigger: | The user will enter ending point (destination) which will prompt the system to identify the user’s current location. |
| Preconditions: | -The user will have to be logged into the system as a participant  -The user will have to have location tracking enabled  -The location that the user entered will have to be valid |
| Postconditions: | -The route will have to be identified, if the destination is invalid the user will receive an error message and will be prompt to enter another destination |
| Normal Flow: | UC.1.0 The user will enter a destination  UC.1.1 The system will geolocate the user and identify the starting point  UC.1.2 The system will process the route identification using the google maps API  UC.1.3 The system will identify markers that are previously placed on the map (with a 20 meter offset)  UC.1.4 The system will return the map with the highlighted route from starting location to destination along with all the markers along the route. |
| Alternative Flows: | UC.1.0.E.0 The user will enter a destination  UC.1.1.E.1 The system will geolocate the user and identify the starting point  UC.1.1.E.2 The system fails to geolocate the user.  UC.1.1.E.3 The system will return an location identification error message prompting the user to enable the geolocation function.  UC.1.2.E.1 The system will process the route identification using the google maps API  UC.1.2.E.2 The google maps API fails to return a route  UC.1.2.E.2 The system will return a connection error message prompting the user to enable the Wifi or mobile data  UC.1.3.E.1 The system will identify markers that are previously placed on the map  UC.1.3.E.2 The system have too many markers to display.  UC.1.3.E.3 The system will reduce the number of markers to “priority markers”  UC.1.3.E.4 The system will return the priority markers |
| Exceptions: | UC.1.0.E.1 The location can not be found.  UC.1.0.E.2 The system will display an error message and prompt the user to enter the location again |
| Includes: | -Add Marker |
| Priority: | -Priority markers will be displayed if the runtime for the loading all the markers take too long (we need to know how long is too long) |
| Frequency of Use: | This use case will be processed every time the user uses the application. An average of twice every login. |
| Business Rules: | N/A |
| Special Requirements: | -Will take less than 1 minute to search the route |
| Assumptions: | -We are assuming there are markers pre-coded into the system |
| Notes and Issues: | -We have to identify what are priority markers (for example, sewer caps and metal plates on the road that will not disappear from the obstacle priority list in a short period of time) |

Use Case Template

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| Use Case ID: | UC.2 | | |
| Use Case Name: | Login | | |
| Created By: | Clement Lee | Last Updated By: | Shang-Hung Tsai |
| Date Created: | 2/14/2016 | Date Last Updated: | 3/16/2016 |

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| --- | --- |
| Actors: | User |
| Description: | The user will be asked to login in order to use this app |
| Trigger: | The user goes to the web app page, a login page will show up. The user needs to enter a valid account and password to login. |
| Preconditions: | The user needs to have a valid account. |
| Postconditions: | The user will be logged into the system. If the combination is invalid, the user will receive an error message and will be prompt to re enter account name and password |
| Normal Flow: | UC.2.0 The user will enter the web app page  UC.2.1 The user will enter account name and password, and then clicks on the login button  UC.2.2 The system will verify the validity of account name and password  UC.2.3 The user will successfully login. |
| Alternative Flows: | UC.2.0 E.0 The user will enter the web app page  UC.2.1 E.1 The user will enter account name and password, and then clicks on the login button  UC.2.2 E.2 The system will verify the validity of account name and password  UC.2.3 E.3 The user will successfully login.  UC.2.3 E.3 The combination is invalid, the system will show an error message and ask the user to try again. |
| Exceptions: | UC.2.1 E.2 The user enters invalid format of account name or password  UC.2.2 E.3 The system will display an error message and prompt the user to enter the location again |
| Includes: | -Route Searching  -Add marker |
| Priority: | Set up the database for storing user accounts and infos |
| Frequency of Use: | By default, the user will be asked for username and password before logged into the system, so the frequency of use is about once every time user uses this app. |
| Business Rules: | N/A |
| Special Requirements: | we are asking users to create a new account with us  The password needs to be at least 6 digits long |
| Assumptions: | We assume we have an efficient way to authenticate username and passwords |
| Notes and Issues: | We decide to ask users to create a new account with us. We need develop more specific requirements on the format of the usernames and passwords. |

Use Case Template

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| Use Case ID: | UC.3 | | |
| Use Case Name: | Add Marker | | |
| Created By: | Clement Lee | Last Updated By: | Julia Shi |
| Date Created: | 2/14/2016 | Date Last Updated: | 3/18/2016 |

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| --- | --- |
| Actors: | User |
| Description: | The user will press the “Add marker” button which will open the add marker state. The application will geolocate the user and allow them to use their own location or enter another location with the ‘drop pin’ function of maps. The user can then enter the current/historical fact that will be added to the database. |
| Trigger: | The user will click the “Add marker” button, which will open the page and allow them to enter title,comment and type of marker below |
| Preconditions: | -The user will have to be logged in and have location tracking enabled  -The user has already opened the add marker page |
| Postconditions: | -The location will have to be valid  -Both the title box and comment box have to have inputs  -Title inputs will be less than 140 characters |
| Normal Flow: | UC.3.0 The user will press the “Add marker” button from the home page  UC.3.1 The system will use the Google Maps API to locate the user and return their coordinates or the user enters their desired location  UC.3.2 The user will enter a title in the title box, a description in the description box and choose the type of marker it is  UC.3.3 UC.3.4 The user will press the “Upload” button  UC.3.4 The system will add these markers so that when another user is in within a set radius of the new marker, they will be able to view the comments |
| Alternative Flows: | UC.3.0.E.0 The user will enter a location and the system will return the location  UC.3.0.E.1 System fails to geolocate  UC.3.0.E.2 Error message for user to enter location manually  UC.3.1.E.0 System fails to upload text  UC.3.1.E.1 Returns error message  UC.3.1.E.2 Asks user to fill in form again |
| Exceptions: | UC.3.0.E.0 Location is not accurate  UC.3.0.E.1 User will refresh page  UC.3.0.E.2 The system will refresh and relaunch the Google Maps API and return the updated location |
| Includes: | -Location finder  -Add marker  -Title and comment boxes |
| Priority: | -Only markers updated in the past 24 hours will be shown |
| Frequency of Use: | This will be used every time a user wants to upload a comment. This may occur for up to 20 times in 24 hours depending on popularity |
| Business Rules: | N/A |
| Special Requirements: | -Uploading the comment to the database will take less than 30 seconds |
| Assumptions: | -Assume user inputs non-offensive language and knows how to use the app |
| Notes and Issues: | Hard to test if other people will see the marker if they are within 20 meters |

Use Case Template

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| Use Case ID: | UC.4 | | |
| Use Case Name: | View details of marker/Vote on marker | | |
| Created By: | Shang-Hung Tsai | Last Updated By: | Jacob Dansey |
| Date Created: | 2/15/2016 | Date Last Updated: | 3/21/2016 |

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| Actors: | User |
| Description: | User will hover over marker on GoogleMaps API to see title of marker. User will click on the marker, which will pull up a window to show the entire description of the marker as well as a voting system. Votes set priority of marker and a certain number of downvotes removes marker from database |
| Trigger: | -hover over marker for title  - click on marker for description window  - vote on helpfulness of marker |
| Preconditions: | -user is logged in to the app  - markers are visible on the Google Map |
| Postconditions: | -user is viewing a window with description of marker  -marker is voted on, if it is below downvote threshold then marker gets removed |
| Normal Flow: | UC.4.0 User will hover over visible marker on the GoogleMap  UC.4.1 Title of marker will be displayed  UC.4.2 User will click on marker  UC.4.3 A separate window will come up displaying the description of the marker  UC.4.4 User has option to vote on marker  UC.4.5 If number of downvotes on marker is under threshold, marker gets removed from database |
| Alternative Flows: | UC.4.1.E.1 The system will attempt to geolocate the user and identify the starting point  UC.4.1.E.2 The system fails to geolocate the user.  UC.4.1.E.3 The system will return an location identification error message prompting the user to enable the geolocation function.  UC.4.2.E.1 The system will send the query to the database for markers  UC.4.2.E.2 The marker API fails to return a marker JSON  UC.4.2.E.2 The system will return a connection error message prompting the user to enable the Wifi or mobile data  UC.4.3.E.1 The system will identify markers that are previously placed on the map  UC.4.3.E.2 The system have too many markers to display.  UC.4.3.E.3 The system will reduce the number of markers to “priority markers”  UC.4.3.E.4 The system will return the priority markers |
| Exceptions: | UC.3.0.E.0 Connection to database broken  UC.3.0.E.1 User will refresh page  UC.3.0.E.2 The system will refresh and relaunch the Google Maps API with markers |
| Includes: | -Google Maps  - Markers on map  - title box  - description box with voting system |
| Priority: | -Only markers within a set radius of your location will be shown on the map |
| Frequency of Use: | This will be used every time a user wants to find more information about a marker that appears on the map |
| Business Rules: | N/A |
| Special Requirements: | -Markers should already appear on map upon showing the page |
| Assumptions: | -User is close enough to marker for it to appear on map |
| Notes and Issues: |  |

Use Case Template

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| Use Case ID: | UC.5 | | |
| Use Case Name: | Display current event markers | | |
| Created By: | Jacob Dansey | Last Updated By: | Jacob Dansey |
| Date Created: | 3/21/2016 | Date Last Updated: | 3/21/2016 |

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| --- | --- |
| Actors: | User |
| Description: | The user will choose the “current” view on Google Maps (or it displays as the default). This will make a call to the database to display only markers of type ‘current’ and only as recently as the past twenty-four hours |
| Trigger: | The user will click a tab or radio button option that picks the “current” view |
| Preconditions: | -The user will have to be logged into the system as a participant  -The user will have to have location tracking enabled  - Successful internet and connection to database |
| Postconditions: | -Markers within a given radius of users location and of type “current” will appear on the map.  -Markers of type “current” that were posted more than a day ago will not appear  -Markers with a certain number of downvotes do not appear |
| Normal Flow: | UC.5.0 The user will choose the “current” view for Google Map  UC.5.1 The system will run a query on the database for markers with type ‘current’ that were posted within a day of query and above a downvote threshold  UC.5.2 All markers from the query that are within a given radius of the user are displayed on the map |
| Alternative Flows: | UC.5.0.E.1 The system will attempt to geolocate the user and identify the starting point  UC.5.0.E.2 The system fails to geolocate the user.  UC.5.0.E.3 The system will return an location identification error message prompting the user to enable the geolocation function.  UC.5.2.E.1 The system will send the query to the database  UC.5.2.E.2 The marker API fails to return a marker JSON  UC.5.2.E.2 The system will return a connection error message prompting the user to enable the Wifi or mobile data  UC.5.3.E.1 The system will identify markers that are previously placed on the map  UC.5.3.E.2 The system have too many markers to display.  UC.5.3.E.3 The system will reduce the number of markers to “priority markers”  UC.5.3.E.4 The system will return the priority markers |
| Exceptions: | UC.5.0.E.1 The database can not be connected to.  UC.5.0.E.2 The system will display an error message and prompt the user to check connection |
| Includes: | -current/historical slide bar or radio button |
| Priority: | -Priority markers will be displayed if the runtime for the loading all the markers take too long (we need to know how long is too long) |
| Frequency of Use: | This use case will be processed every time the user uses the application and selects ‘current’ view which is default. This happens once every login. |
| Business Rules: | N/A |
| Special Requirements: | -Will take less than 1 minute to return markers |
| Assumptions: | -We are assuming there are markers pre-coded into the system |
| Notes and Issues: | -We have to identify markers that have been up for more than twenty-four hours and remove from system  -We have to identify markers that have a certain number of downvotes and remove from system |

Use Case Template

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| --- | --- | --- | --- |
| Use Case ID: | UC.6 | | |
| Use Case Name: | Display historical event markers | | |
| Created By: | Jacob Dansey | Last Updated By: | Jacob Dansey |
| Date Created: | 3/21/2016 | Date Last Updated: | 3/21/2016 |

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| --- | --- |
| Actors: | User |
| Description: | The user will choose the “historical” view on Google Maps (or it displays as the default). This will make a call to the database to display only markers of type ‘historical’ |
| Trigger: | The user will click a tab or radio button option that picks the “historical” view |
| Preconditions: | -The user will have to be logged into the system as a participant  -The user will have to have location tracking enabled  - Successful internet and connection to database |
| Postconditions: | -Markers within a given radius of users location and of type “historical” will appear on the map.  -Markers of type “historical” that have a certain number of downvotes do not appear |
| Normal Flow: | UC.6.0 The user will choose the “historical” view for Google Map  UC.6.1 The system will run a query on the database for markers with type ‘historical’ and above a certain downvote threshold  UC.6.2 All markers from the query that are within a given radius of the user are displayed on the map |
| Alternative Flows: | UC.6.1.E.1 The system will attempt to geolocate the user and identify the starting point  UC.6.1.E.2 The system fails to geolocate the user.  UC.6.1.E.3 The system will return an location identification error message prompting the user to enable the geolocation function.  UC.6.2.E.1 The system will send the query to the database  UC.6.2.E.2 The marker API fails to return a marker JSON  UC.6.2.E.2 The system will return a connection error message prompting the user to enable the Wifi or mobile data  UC.6.3.E.1 The system will identify markers that are previously placed on the map  UC.6.3.E.2 The system have too many markers to display.  UC.6.3.E.3 The system will reduce the number of markers to “priority markers”  UC.6.3.E.4 The system will return the priority markers |
| Exceptions: | UC.6.1.E.1 The database can not be connected to.  UC.6.1.E.2 The system will display an error message and prompt the user to check connection |
| Includes: | -current/historical slide bar or radio button |
| Priority: | -Priority markers will be displayed if the runtime for the loading all the markers take too long (we need to know how long is too long) |
| Frequency of Use: | This use case will be processed every time the user uses the application and selects ‘historical’. This happens less frequently than the default ‘current’ view because it is not updated as often. Possibly use in one in every three logins. |
| Business Rules: | N/A |
| Special Requirements: | -Will take less than 1 minute to return markers |
| Assumptions: | -We are assuming there are markers pre-coded into the system |
| Notes and Issues: | -We have to identify markers that have a certain number of downvotes and remove from system |

**Revision History**

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| Clement Lee | 2/14/16 | Initial Draft | 0.1 |
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