

Road Safety Management

Iteration 2

By

Divya Vala

Kavya Devineni

Spandan Mannava

Mohan Krishna Doddala

Project objective

The main objective of road safety management project is to create a mobile application which gives alert to the user whether it is safe or not to travel in a particular road. Depending on the intensity of accidents safety alert is given to the user. User can also register using web application of road safety management. To achieve this login and registration page is created and login details of user are stored in a database. Accident data is collected and stored in a database based on which alert is given to the user. Application also has some additional features like providing information if road is closed, is the user is alone or scared he will be given information regarding nearest busy areas and the other users present in that region with the permission of other users and also information about traffic.

#Increment 2

In second increment of road safety management project accident records are retrieved from www.kcscout.net website. These collected accident records are stored in a database. A road safety management web page is created where user can also login and register using this website.

Kscout

Kansas City scout is a new technology tool box that address transportation needs in different ways. The required accident records necessary to decide the safety level of the road are retrieved from this Kansas City scout website. Using high resolution video cameras and roadway sensors scout will monitor the traffic conditions and record if any accidents occur.

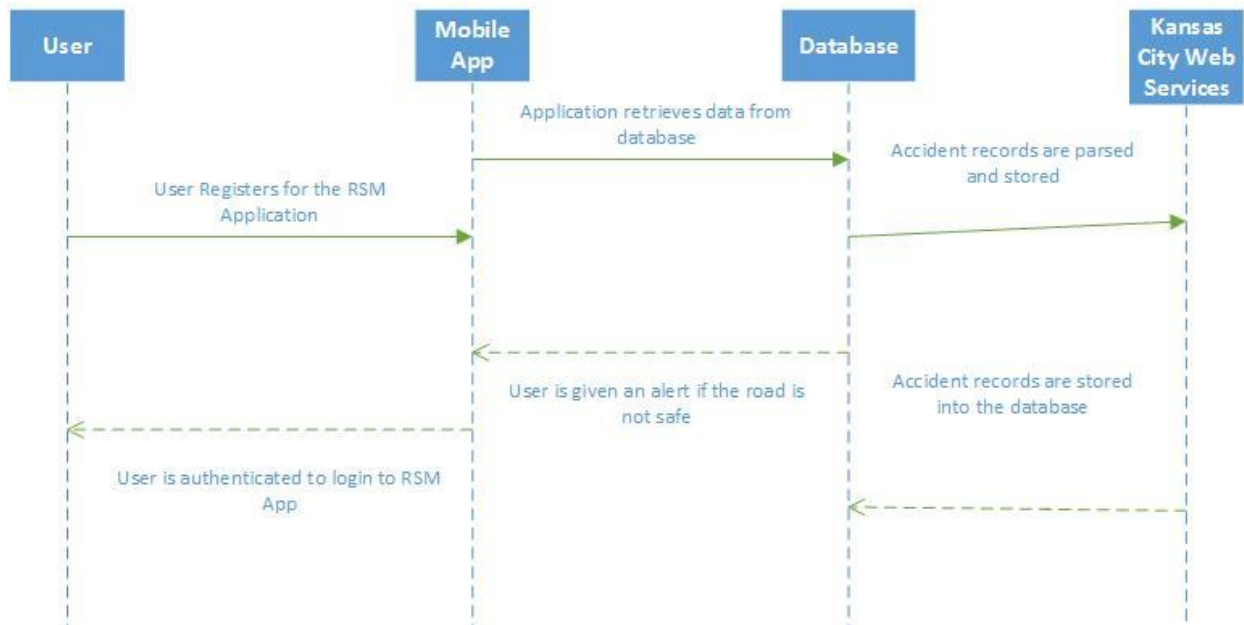
Service Description

Login service is created in the previous iteration which helps the user to register and login with the application. User first registers using registration service and then login into the application. We designed login module with username and password. After entering the user details, a click on submit button, will submit these values and the user will be logged in. These user details will be stored in the database with username and password key values. Next time, when the same user has to login, he has to enter correct combination of username and password. Validations are written cover all the possible scenarios for username and password combination. Database is created and user data is stored into the database. Accident records are stored in another database. Which are retrieved into the application to generate the safety level.

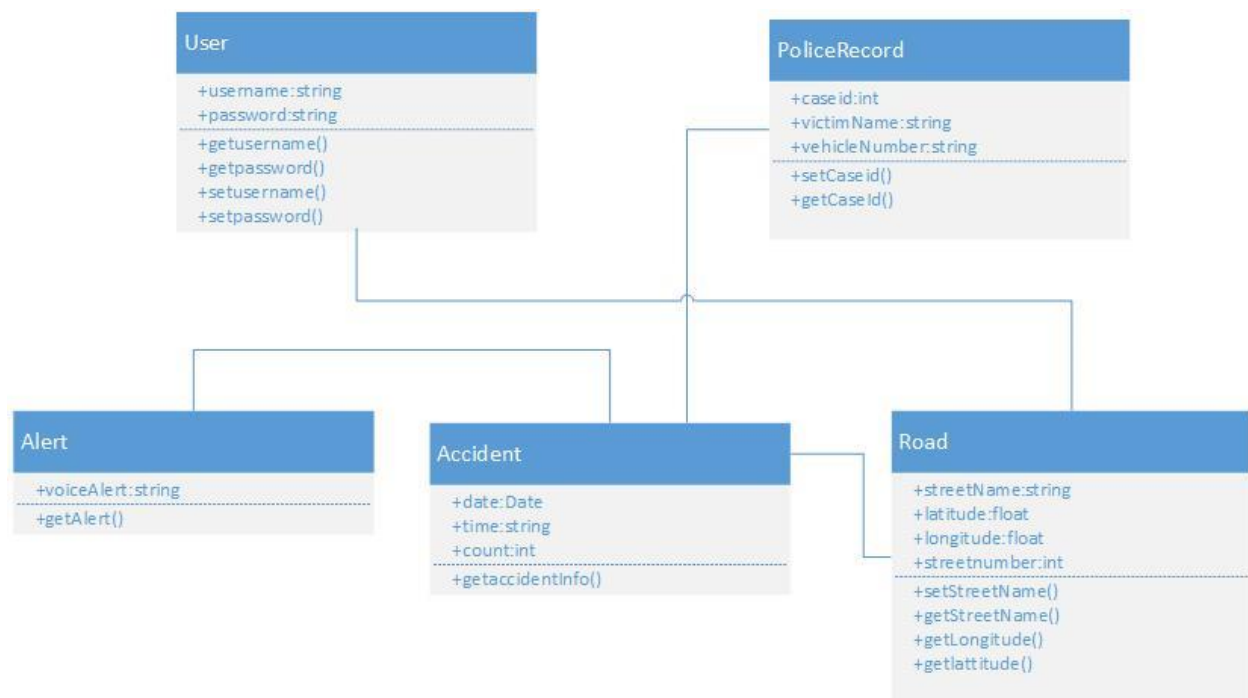
Design of Web Client Interface

- user interface has login and signup
- user can also login through their Google+ id
- username and password are stored in database

Sequence Diagram





Class Diagram




Detail Design of Services

Story #7

| | |
|--|--|
| Summary Collect data from Kansas city web services. All details of the accident records, type, location, description and start time are retrieved. | |
| Detail An html parser is designed to collect data from kansas city web services. All the details of the accident record type, location, description and start time are parsed. | |
| Assignee  kavya devineni | Creator  kavya devineni |
| Epic: #E1 Architectural Design For RSM #E2 Storing Accident data in Database | Category: database |
| Points: 13 | Time Estimate: 40 hours |



In story7 data is collected from Kansas City web service called kscout and these details of accident records are retrieved.

Story #8

| | |
|---|--|
| Summary Accident records which are parsed are stored in to the database. | |
| Detail Database columns for type, location, description and start time are created and the parsed results of accident records are stored in them. Primary keys are defined on location and description. | |
| Assignee <input type="text" value="DivyaVala x"/> | Creator  kavya devineni |
| Epic: #E1 Architectural Design For RSM #E2 Storing Accident data in Database | Category: database |
| Points: 13 | Time Estimate: 40 hours |
| Tags | Iteration: Iteration2 |

Retrieved accident records are stored in a database. The parsed results from Kansas city web service are used to decide the accident intensity which in turn helps to decide the safety of the particular road.

Story #9

| | |
|---|--|
| Summary Web client interface design for registration and login module for Road Safety Management. | |
| Detail web client design for registration and login is designed. User details are stored in the database. validations are done based on these user details. | |
| Assignee  spandan8055 | Creator  kavya devineni |
| Epic: #E1 Architectural Design For RSM | Category: data |
| Points: 13 | Time Estimate: 40 hours |
| Tags #database | Iteration: Iteration2 |

Web client interface is designed with login and registration pages. Using this web application user can even register for road safety management application.

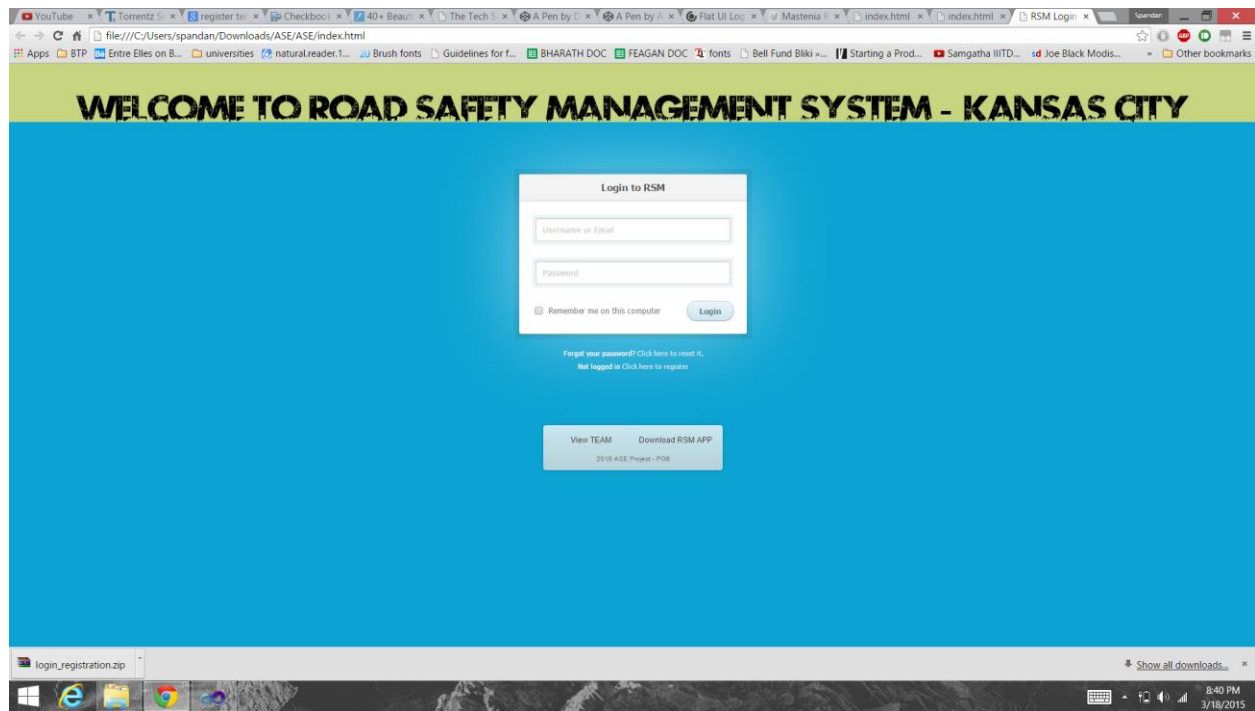
Deployment

<http://www.scrumdo.com/projects/project/asersm/iteration/121746>

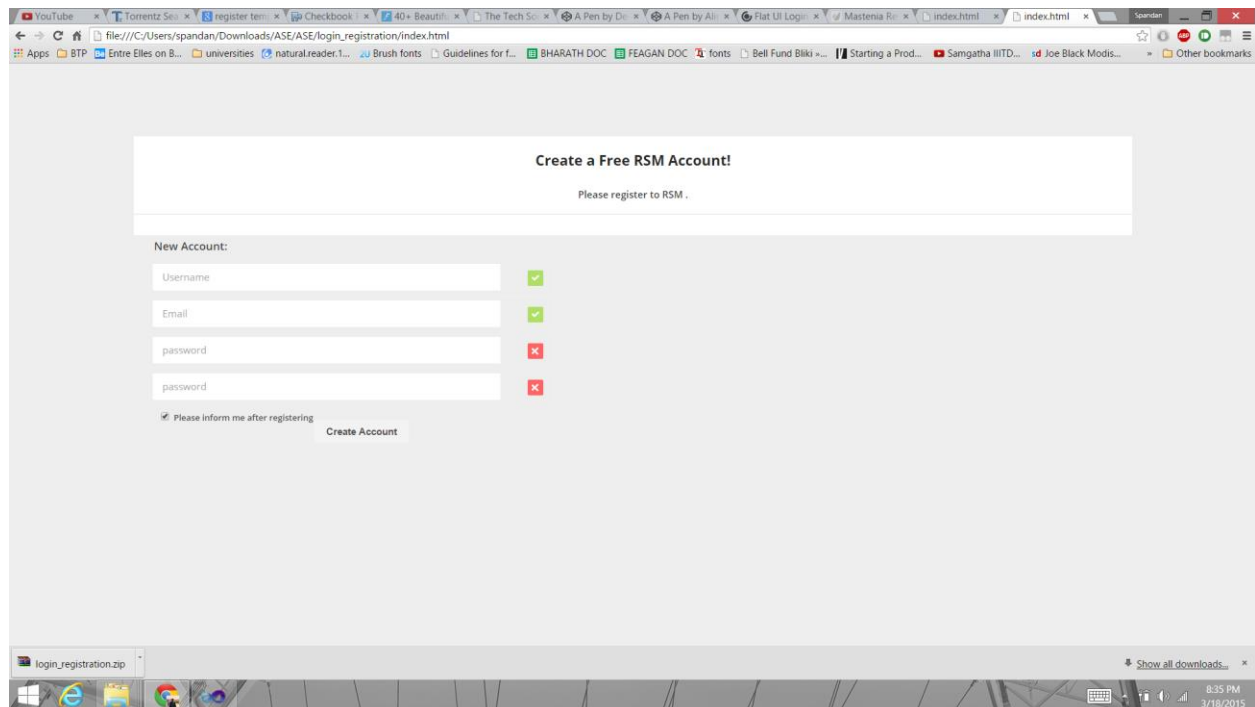
Screenshots and explanation on the design and implementation



In iteration1 login page is created for mobile application.



Login page for web application of road safety management is created.



The above image describes the registration page for road safety management.



After registration the above statement will be described.

```
c:\wamp\bin\mysql\mysql5.6.17\bin\mysql.exe

Database changed
mysql> CREATE TABLE Incidents (Type VARCHAR(20), Location VARCHAR(20), Descripti
on VARCHAR(20), StartTime VARCHAR(20));
Query OK, 0 rows affected (0.31 sec)

mysql> show tables;
+-----+
| Tables_in_test |
+-----+
| incidents      |
+-----+
1 row in set (0.00 sec)

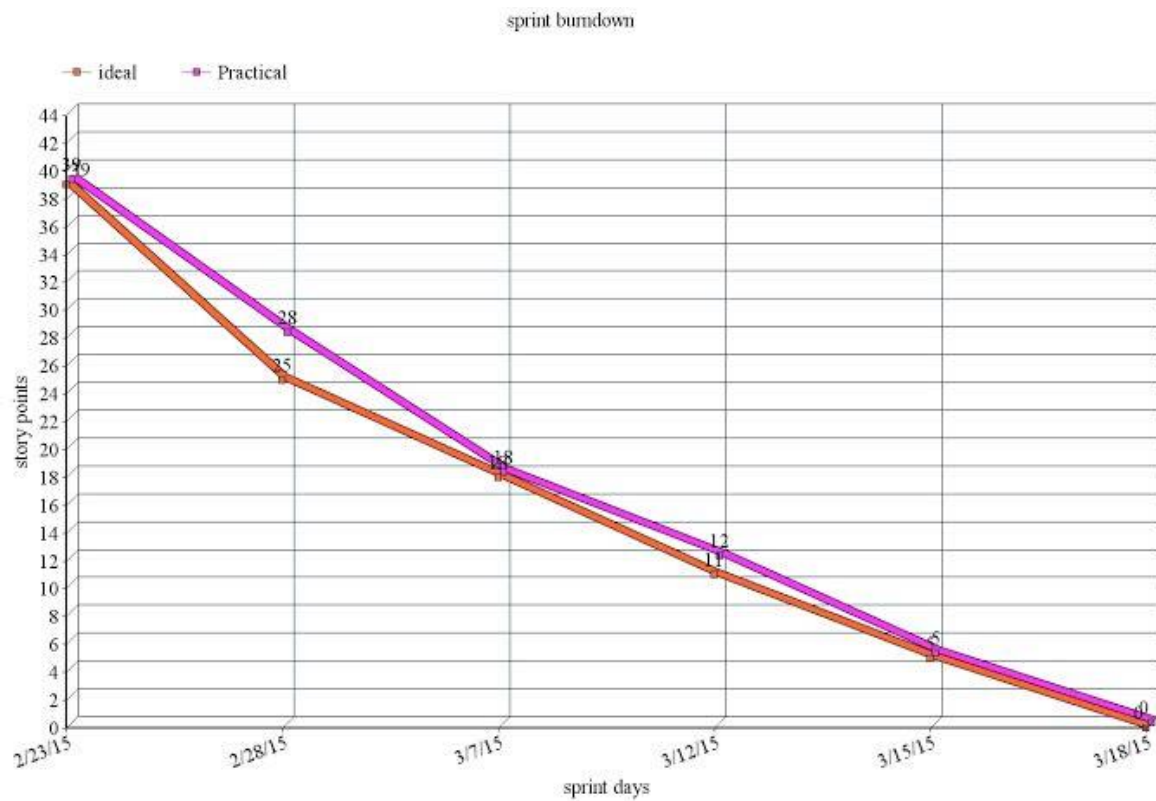
mysql> describe incidents;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Type       | varchar(20)   | YES  |     | NULL    |       |
| Location   | varchar(20)   | YES  |     | NULL    |       |
| Description | varchar(20)   | YES  |     | NULL    |       |
| StartTime  | varchar(20)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.06 sec)

mysql> use dtbases
```

Design of unit test cases

| Test Case ID | Description | Execution Status | Expected Result |
|--------------|---|------------------|---|
| 1 | Entry of correct username and password | PASS | User must be able to login successfully. |
| 2 | Entry of wrong username and correct password | PASS | User must not login successfully. |
| 3 | Entry of correct username and wrong password | PASS | User must not login successfully |
| 4 | Entry of wrong username and password | PASS | User must not login successfully |
| 5 | Entry of user values in to the database | PASS | Database must be populated with the user details |
| 6 | Data from web service has to be retrieved from html parser. | PASS | User must not be able to login. |
| 7 | The parsed data has to be stored in the database | PASS | All the accident records are stored in the database |

Sprint Burndown Chart



References

<http://www.kcscout.net>

<http://accidentdatacentre.com/>

<http://www.modot.org/>

<http://accidentdatacentre.com/us/missouri/kansas-city-mo/kansas-city>