

ROAD SAFETY MANAGEMENT

PROJECT PLAN

Submitted By:

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Introduction: Road Safety Management (RSM) gives an entire overview of the safety of a particular road. This helps an end user to know the intensity of accidents in that road, last noted accident in that road and gives an alert if the user is nearby that road. It works along with Google maps to take input and it deals with safety of the user. This will be very useful for visitors or foreigners who might visit Kansas City.

Project Goal and Objectives:

Overall Goal: The main goal of Road Safety Management is to ensure safety to end users by listing detailed information about a road, accident intensity of that road, last noted accident the user and alerts the user about that road.

Problem Statement: Now-a-days, there is a hike in accident rate and most of the people are prone to accidents in one or other way. People prefer to avoid a road which is prone to accidents. Foreigners, who visit a new place would like to know the accident prone areas, so that they can avoid any sort of discomfort in their trip. Road Safety Management provides insight to this kind of information. This helps end users to have access to all sort of accident information of a particular road. With this information, they can avoid accidents, and also avoid traffic prone areas if there's an accident on any road.

Significance:

- Gives all information related to accidents on a particular road (Intensity of accidents, last noted accident)
- Application will automatically give an alert when the user approaches a road with high accident intensity.

Project Architecture:



Project Background:

There are existing web applications, to give the accident information of an area. But our project aims at mobile application, which is very useful in now-a-day scenario, where the world is running on mobility. We aim at reporting the user an alert, which helps the user to avoid that road in unpredictable conditions. We are enabling user to have all the information related to accidents, so that he can have complete knowledge on the road safety and he can take appropriate measures.

Related Work:

There are various web applications for accident reporting worldwide. They report the accident date, time and details of the accident. They also report if there is any police case filed on that accident and if so, also mentions the case ID.

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

But now we are aiming to design an Android App, which can be installed on a mobile phone and used by the user. He can use it handily wherever he goes and can be safe

when going on roads. This app is exclusively designed for Kansas City and can be extended to any city. Data is integrated from different sources.

Requirements:

Requirement Specification:

Input and Output:

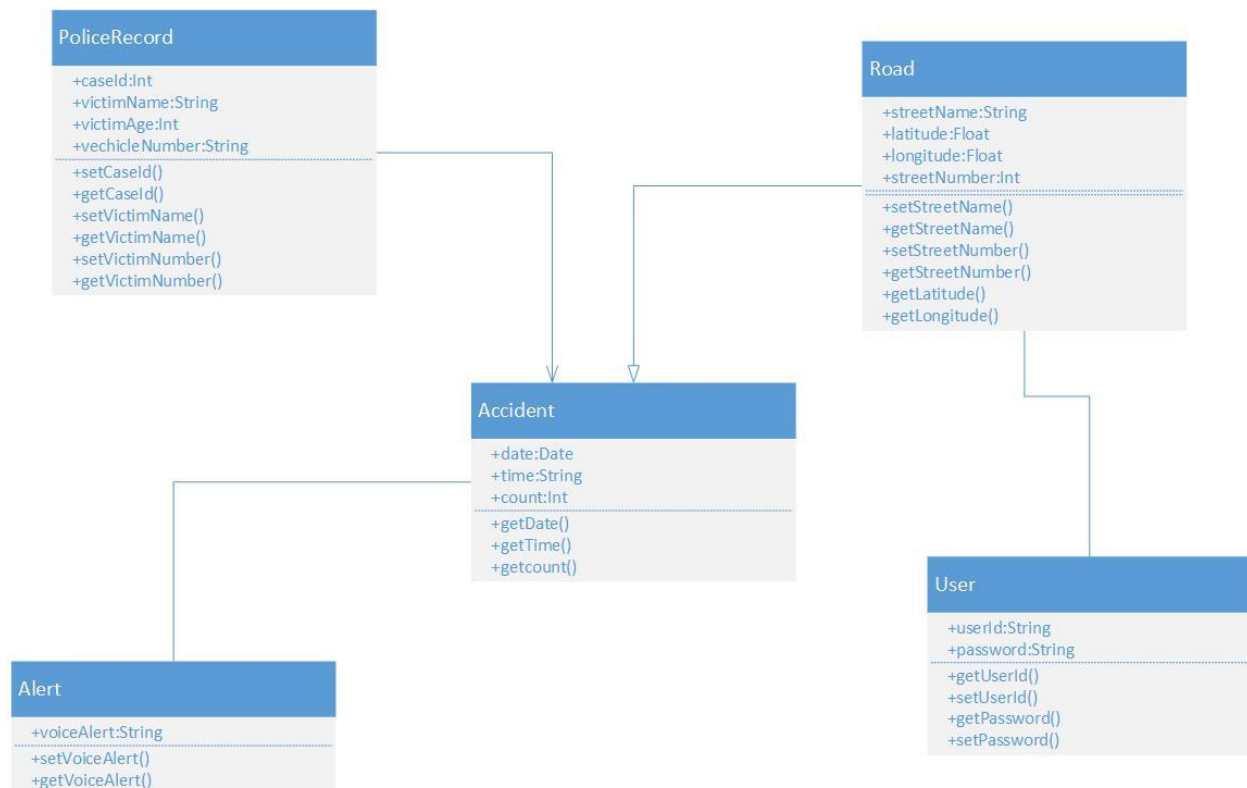
Input: Input is taken from the user's location. We use this information to track the user's presence and pop up an alert, if he is in accident prone area.

Output: Output is the accident list, with all the details of the accidents and alert if the user is in accident prone area.

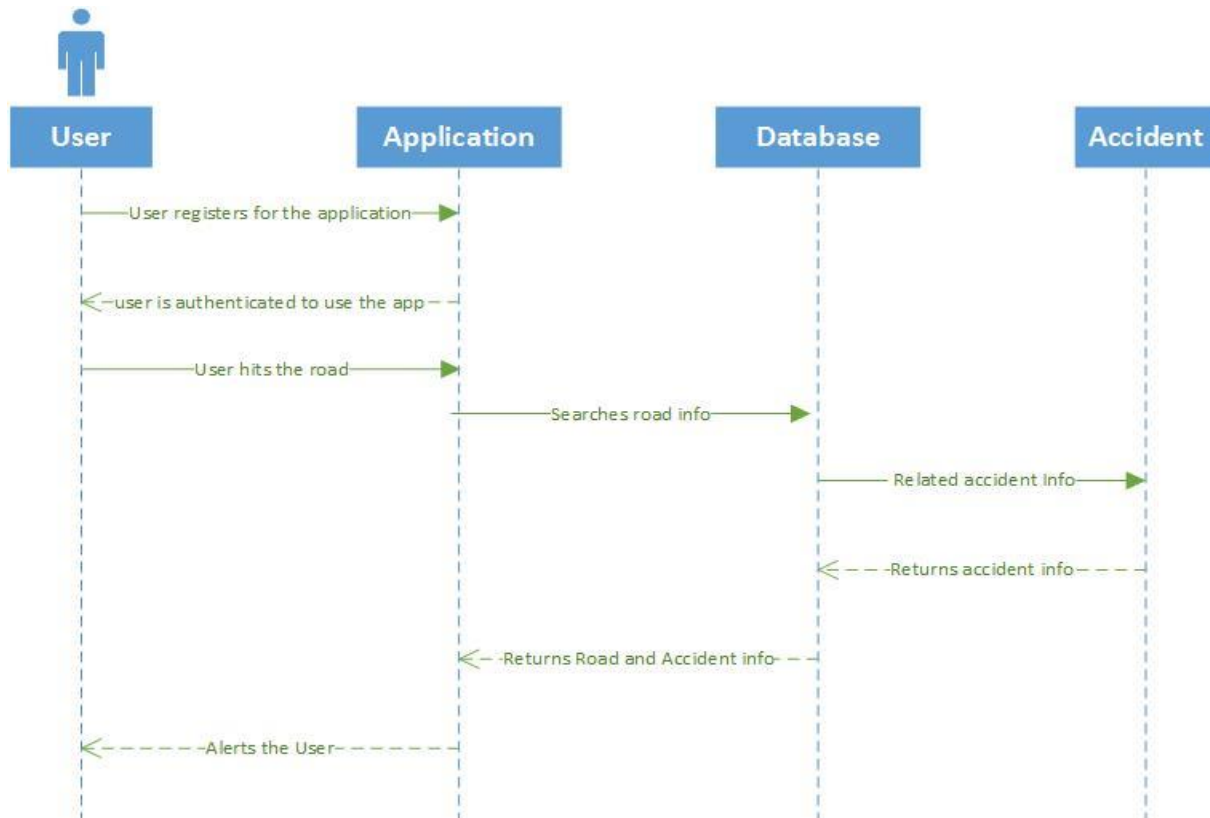
Technical Requirements:

Accident data has to be collected from Kansas Government, and it has to be feeded into the database.

UML Diagram:



Sequence Diagram:



Hardware Requirements:

Dual Core Processor or 1GHz Processor

RAM:512 MB

Memory:25 MB

Software Requirements:

Operating System: Android

Version: 2.3 or Later

Proposed system:

Functional Requirements: Functional requirements capture the extended behavior of the system. This behavior may be expressed as services, tasks or functions that system is required to perform

The Application initially registers to the app and gets user id and password

The application validates and user login to the app

Application searches for accident information of road as user moves on.

Application retrieves the accident information (accident intensity, last noted accident, police reported accidents) to the user.

Application pops up an alert for the user if the user approaches accident prone area.

Non-Functionality Requirements:

- User Friendly
- Security
- Maintainability
- Performance
- Scalability

Technological and Architectural Requirements:

Platform: Android OS

Tools: Visio

Eclipse IDE

SQL

Framework Specification: Android OS

System Specification:

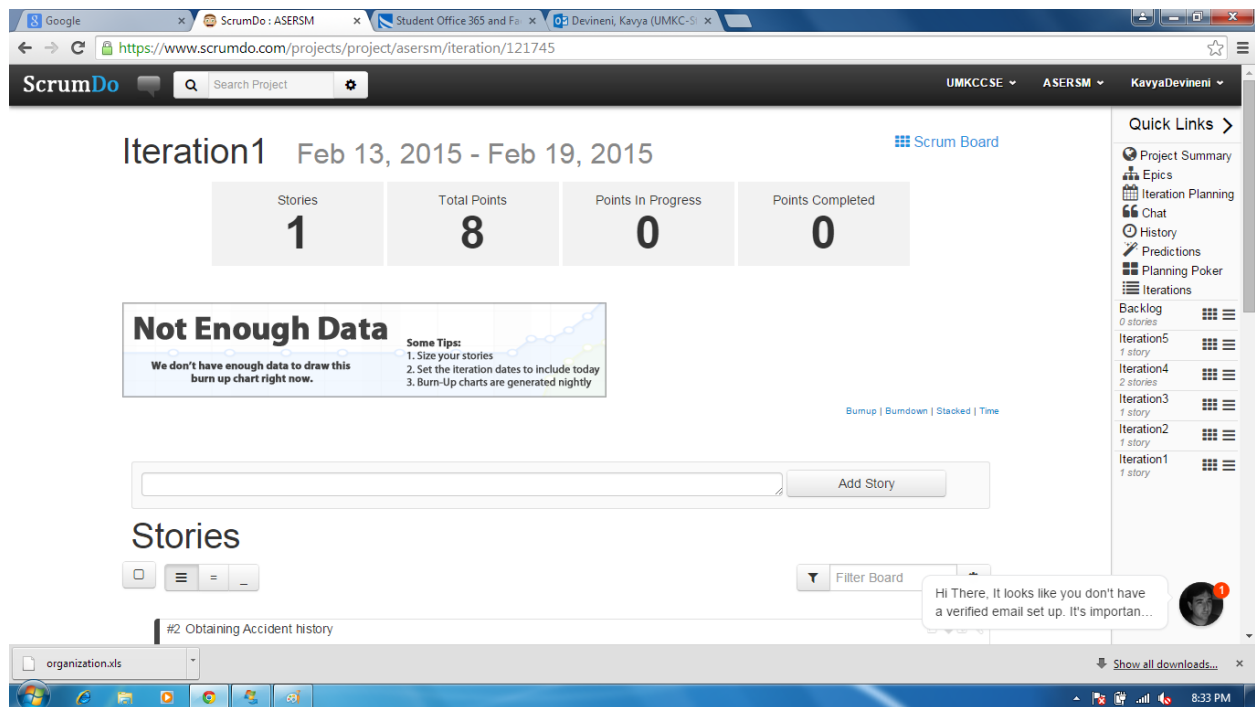
Existing System:

User uses a web application to get the accident details, and no alert is popped up.

New System:

- **Mobile Application:** In this project, we give a mobile application to the user, so that he can use that application handily, wherever he goes.
- **Alert:** User is popped up with an alert, when he goes to an accident prone area.
- **PoliceCaseID:** User gets the details of police Case ID, if there is a police case filed on that accident.
- **User Registration:** User is given an unique username and password to register to the application, so that the application is secured.
- **Count:** Accident count is given for a particular road. The entire list is given to the user.
- **Last noted Accident:** User gets the information of the recent accident.
- **Accident details:** Accident place, date, time, entire information of the accident is given to the user.

Plan By Services:



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Some Tips:

1. Size your stories
2. Set the iteration dates to include today
3. Burn-Up charts are generated nightly

Burnup | Burndown | Stacked | Time

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Stories

#2 Obtaining Accident history

Obtaining Accident data. All data related to accidents in Kansas City should be collected.

Todo Tasks | 0 Comments | Data #E1

8

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- Planning Poker
- Iterations

Backlog 0 stories

Iteration5 1 story

Iteration4 2 stories

Iteration3 1 story

Iteration2 1 story

Iteration1 1 story

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Iteration2 Feb 20, 2015 - Feb 27, 2015

Scrum Board

Stories	Total Points	Points In Progress	Points Completed
1	8	0	0

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Some Tips:

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#3 Storing Accident data in Database

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Backlog 0 stories

Iteration5 1 story

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Iteration1 1 story

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#3 Storing Accident data in Database
The collected data has to be stored in the Database. Schema has to be designed to store all data in an organized way.
Todo Tasks 0 Comments database #E1 8

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Iteration3 Mar 02, 2015 - Mar 20, 2015

Scrum Board

Stories	Total Points	Points In Progress	Points Completed
1	5	0	0

Not Enough Data
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Some Tips:
1. Size your stories
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Burnup | Burndown | Stacked | Time

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Backlog

- 0 stories
- Iteration5
- 1 story
- Iteration4
- 2 stories
- Iteration3
- 1 story
- Iteration2
- 1 story
- Iteration1
- 1 story

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#1 Designing architecture for Road Safety Measurement

Architectural design for Road Safety Management and Architectural diagram.

Todo Tasks 0 Comments Architecture #E1

5

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https://www.scrumdo.com/projects/project/asersm/iteration/121748

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Backlog

- 0 stories
- Iteration5
- 1 story
- Iteration4
- 2 stories
- Iteration3
- 1 story
- Iteration2
- 1 story
- Iteration1
- 1 story

Iteration4 Mar 23, 2015 - Apr 10, 2015

Scrum Board

Stories	Total Points	Points In Progress	Points Completed
2	33	0	0

Not Enough Data

We don't have enough data to draw this burn up chart right now.

Some Tips:

1. Size your stories
2. Set the iteration dates to include today
3. Burn-Up charts are generated nightly

Burnup | Burndown | Stacked | Time

Stories

#5 Algorithm to retrieve data from database

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Backlog

- 0 stories
- Iteration5: 1 story
- Iteration4: 2 stories
- Iteration3: 1 story
- Iteration2: 1 story
- Iteration1: 1 story

Stories

Filter Board

#5 Algorithm to retrieve data from database

An algorithm is written to retrieve accident data from database. Application gives this data to the user.

Todo Tasks | 0 Comments | data #E1 20

#4 Algorithm is written to integrate road and accident information

An algorithm has to be written to integrate road and accident information. Application uses this information to inform user about road safety

Todo Tasks | 0 Comments | database #E1 13

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Backlog

- 0 stories
- Iteration5: 1 story
- Iteration4: 2 stories
- Iteration3: 1 story
- Iteration2: 1 story
- Iteration1: 1 story

Iteration5 Apr 13, 2015 - Apr 24, 2015

Scrum Board

Stories	Total Points	Points In Progress	Points Completed
1	8	0	0

Not Enough Data

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Burnup | Burndown | Stacked | Time

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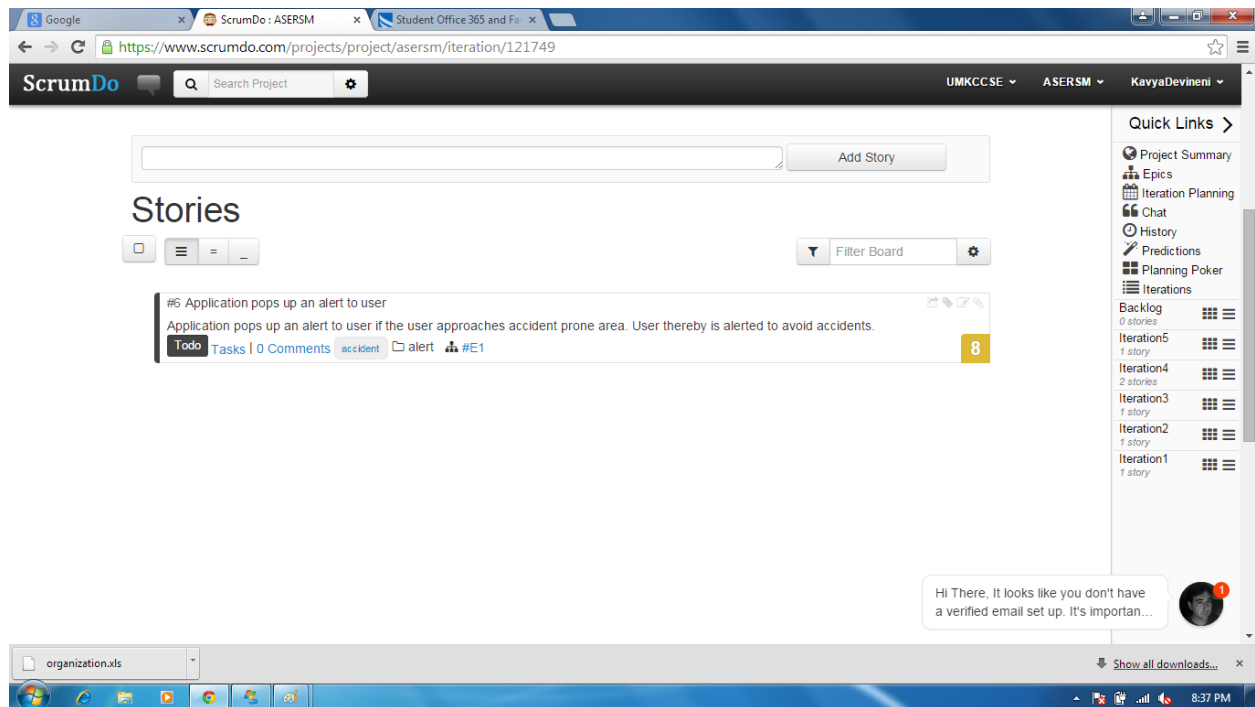
Filter Board

#6 Application pops up an alert to user

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<http://accidentdatacenter.com/>

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