**PROJECT PLAN**

**Victoria State Accident Database**

**Submitted By:**

**GROUP 33**

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# Introduction

## Background

The goal of this project is to be able to develop a simple data analysis and visualisation tool pertaining to road crashes in the state of Victoria, to aid the Victorian government in their overall goal of improving road safety among road users, and in turn, alleviate corresponding social and economic costs.

Currently, the raw data is stored as a table in Excel file. The tool should be able transform this data into meaningful information, where the output is a graphical user interface that will allow users select parameters (e.g. period, type of accident etc.), and produce results in tables and charts that will aid them in data analysis. This will allow the Victorian government to measure if the polices that were set to improve road safety are effective, based on actual performance versus identified goals or metrics (e.g., lowering the number of alcohol-related accidents by a set percentage versus previous year).

## Scope

The scope of the project will cover parts of Scope, Time, and Quality Management, which involves designing, building, and testing activities. Other areas, i.e., Cost, HR, Communication, Risk, and Procurement Management will not be included.

The end output is a software with a graphical user interface that must show the following:

1. Information of all accidents based on a user-selected period.
2. A chart showing the average number of accidents in each hour of the day based on a user-selected period.
3. Retrieve all accidents caused by an accident type that contains a keyword entered by the user (e.g., collision, pedestrian), based on a user-selected period.
4. A chart that shows the impact of alcohol in accidents such as trends over time and accident types involving alcohol.
5. A chart showing the number of accidents among road users, i.e., bicyclists, passengers, drivers, pedestrians, pillions, and motorists, based on user-selected period.

Project documentation is also included, as listed below:

1. Project Plan
2. Gantt Chart
3. Software Design Document
4. Git Log in .txt file
5. Python codes in .py files
6. User Manual
7. Software Testing Report
8. Executive Summary

## Document contents

|  |  |  |
| --- | --- | --- |
|  | **Documents** | **Details** |
| **1** | **Project Plan** | Details the plan for the project containing the following:   1. Overview of the project  * Background * Scope * Document Contents  1. Phase-Based Work Breakdown Structure (WBS). 2. Activity Definition and Estimation showing detailed steps of the WBS and corresponding timelines 3. Project Gantt Chart showing the schedule with corresponding critical path |
| **2** | **Gantt Chart** | Project Gantt Chart in Excel file |
| **3** | **Software Design Documents** | Document to help the software development team understand the requirement:   1. System Vision Document  * Background * System Overview * Potential Benefits  1. Requirements  * User requirements * Software requirements * Use Cases with corresponding use case diagram  1. System Components and Software Design  * Software Design * System Components which includes functions, data structures / data sources, and pseudocodes for all non-standard / non-trivial algorithms that operate on the data structures. |
| **4** | **Git Log in .txt file** | Version control to help keep track of the changes made to the documents throughout the project. |
| **5** | **Python codes in .py file** | Codes used for the software |
| **6** | **User Manual** | Detailed description of how to use the software |
| **7** | **Software Testing Report** | Details of the tests conducted;   1. Unit tests 2. Coverage report 3. Requirements Acceptance testing |
| **8** | **Executive Summary** | A summary of the final output’s capabilities |

# Work Breakdown Structure

WBS is based on Activity Definition &Estimation

A diagram of a project

Description automatically generated

*This section should include the work breakdown structure for the whole project. The elements from the WBS should be used to generate your activity definition and those activities should then be scheduled in the Gantt Chart. Remember to consider ALL project activities – anything you do or will need to do should be included in the WBS*

*WBS’s are usually presented as some kind of hierarchical diagram/chart etc. The details what is involved each work unit should be provided in section 3:* ***Activity Definition***

*You do NOT need to do a WBS Dictionary for this project – the activity definition (whilst slightly different) will suffice. The WBS is focussed on SCOPE. The Activity definition is focussed on TIME.*

# Activity Definition & Estimation

To estimate time periods, periods of 1 day per period was used.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Name** | **Description** | **Duration** | **Start/end** |
| 1.a | Project background | Write the project background section. Include details on client history | 1 | 24th Aug – 25th Aug |
|  |  |  |  |  |

* + 1. Project Management
       1. Initiation (Background and scope) - 2Day
       2. Planning WBS and Activity Deinition & Estimation - 1Day
    2. Requirement Analysis
       1. User Requirement - 3Day
       2. Software Requirement - 3Day
       3. Use cases & Diagram - 2Day
       4. User Manual - 1Day
    3. Software Architecture & Design
       1. UI Design - 3Day
       2. System component - 3Day
       3. Software Architecture - 4Day
       4. Server Architecture - 2Day
    4. Development
       1. Software Development - 12Day
       2. Server Development - 5Day
       3. UI Development - 4Day
    5. Testing
       1. Unit testing - 2Day
       2. Requirement Testing - 2Day
    6. Summary
       1. Executive Summary - 3Day
       2. Executive Full-Testing - 4Day

*From your WBS, define the activities required for your project. You will revise this document and add more detail for part B as you discover more about the project.*

*Each activity should be clearly identified by a number and should match up to your Gantt chart. You should provide some estimations for the time you think each activity will take. This should make it easy to prepare your Gantt chart.*

# Gantt Chart

*This section should contain your Gantt chart. The items in the Gantt chart should match the activity definition from section 3. You should also submit your Gantt chart file separately.*

