# Project Plan

<Project Name>

Student Names

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# Introduction

## Background

## Scope

## Document contents

*Include some background information about the problem, the scope and what this document will contain.*

# Work Breakdown Structure

*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.*

1. Concept
   1. Develop project plan
   2. Define requirements
      1. User requirements
      2. Software requirements
      3. Use Case & Use Case Diagram
2. Design
   1. Define software components
      1. Functions
      2. Data structures
      3. Data sources
   2. User interface Design
      1. Structural Design
      2. Visual Design
3. Software Development
4. Test
   1. Unit test
   2. Coverage Report
   3. Requirement Acceptance Testing
5. Executive Summary

# Activity Definition & Estimation

*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.*

**Activity:01 Functional Requirements:**

The Data Analysis and Visualization Tool should allow users to:

1. enter time and dates (to and from) to set the time period with which to filter Victoria State Accident Dataset;
2. filter Victoria State Accident Dataset based on date and time;
3. filter Victoria State Accident Dataset based on keyword(s);
4. filter Victoria State Accident Dataset for daily trends of accidents (eg: ratio of accidents happening at different time periods throughout the day at different locations);
5. compare the relevance of Dark Street lights against other attributes such as location, conditions, crash type, road user type, object hit;
6. analyse the impact of alcohol consumption on accidents at different time periods throughout the day;
7. analyse and check output results;
8. use charts and infographics to visualize output results;
9. analyse the safest times and locations to travel;
10. compare the relevance of road type and location on accidents.

**Activity:02 Use Case:**

|  |  |  |
| --- | --- | --- |
| **Sr.#** | **Use Case** | **Description** |
| 01 | General Search of VSAD | Filter-less search on VSAD using the DAaV tool returns random results. |
| 02 | Apply *Data & Time* search filter | Time & Date filter will return results within selected time period for analysis. |
| 03 | Apply *Keywords* based search filter | Keywords filter will return targeted search results for analysis. |
| 04 | Apply *Accident Daily Trends* filter | Daily Trend filter will return search results, sorted by time of day. |
| 05 | Apply *Dark Street Lights* filter | Dark Street lights filter will modify search results, based on if it was dark and street lights were on or off. |
| 06 | Check *Alcohol* filter | Alcohol time filter will modify search results, based on if alcohol was a factor |
| 07 | Analyse Output | Selected filters will return specific search results based on selected filters. |
| 08 | Visualize Output on Charts | Output Chart generate charts from the search results returned from selected filters. |
| 09 | Recommendation for Travel | Travel recommendations will return safest time period (least accidents) to travel to selected location |
| 10 | Accidents Comparison | Accidents Comparison will return results based on selected filters for two selected locations for comparison |

# Gantt Chart

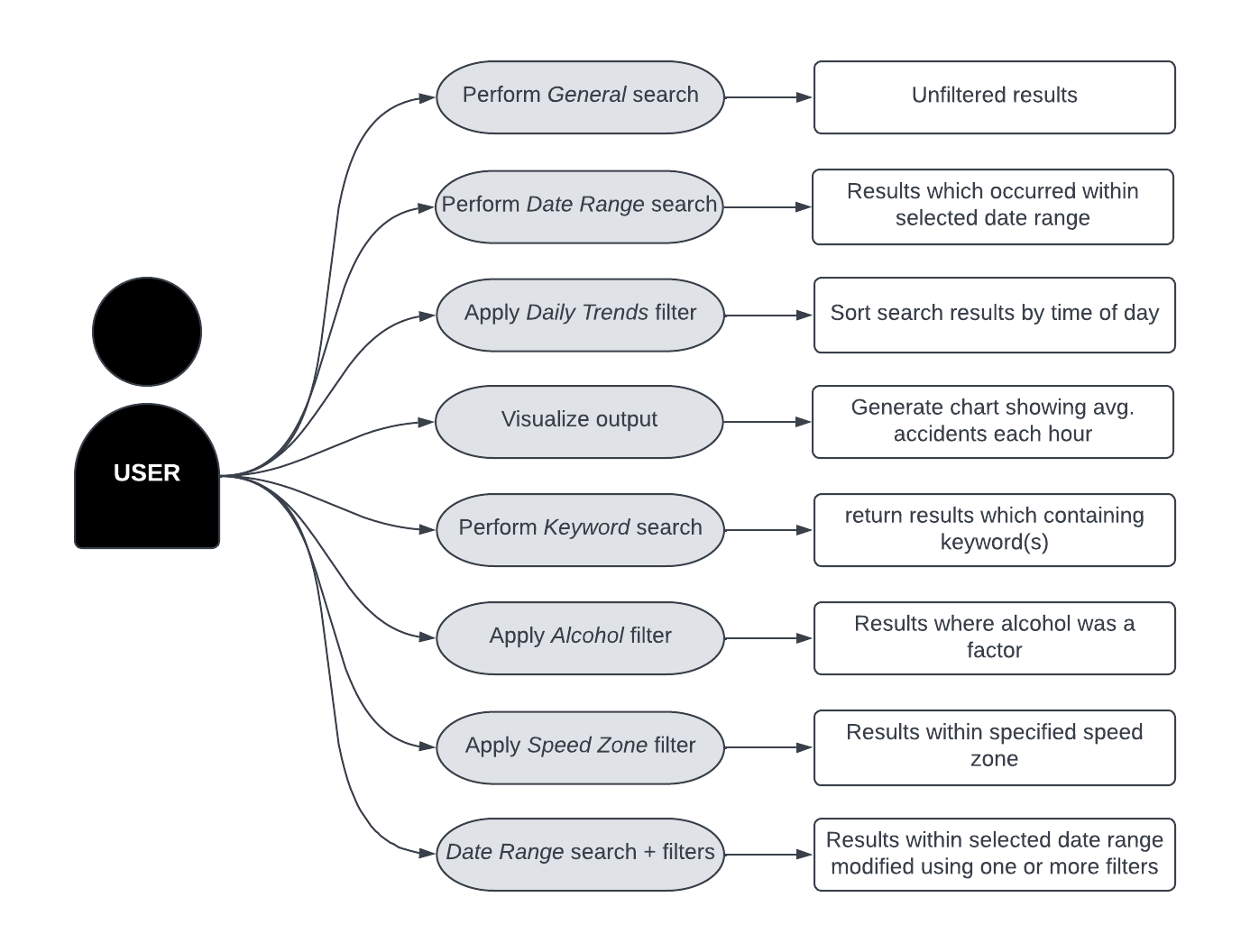
*This section should contain your Gantt chart. The items in the Gantt chart should match the activity definition from section 3. You should also submit your Gantt chart file separately.*

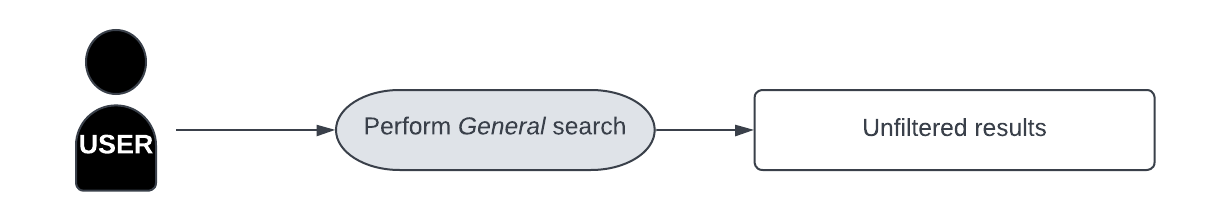
Use cases

There are eight use cases identified. They are details in the table and use case diagram below.

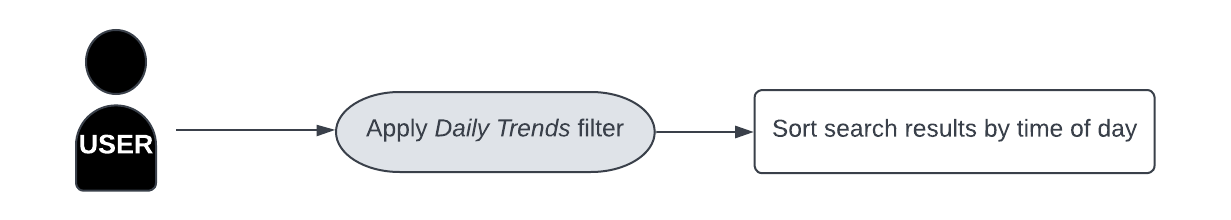
|  |  |  |
| --- | --- | --- |
| **Sr.#** | **Use Case** | **Description** |
| 01 | General Search of accident data | Filter-less search on accident data using the DAaV Tool returns unfiltered results. |
| 02 | Search accident data within selected date range (from *date1* to *date2*) | Will return results which occurred within selected date range. |
| 03 | Apply *Accident Daily Trends* filter | Will sort search results by time of day. |
| 04 | Visualize Output on Charts | Generate chart to show the number of accidents on average in each hour of the day within selected time period. |
| 05 | Perform *Keyword* search | Will return search results which contain the *Keyword(s)* |
| 06 | Apply *Alcohol* filter | Alcohol time filter will return results where alcohol was a factor |
| 07 | Apply *Speed Zone* filter | Will return results which occurred within specified *Speed Zone.* |
| 08 | Search accident data within selected date range and apply one or more filters | Will modify search results within selected date range based on *Keyword*, *Alcohol* and/or *Speed* *Zone* filters |

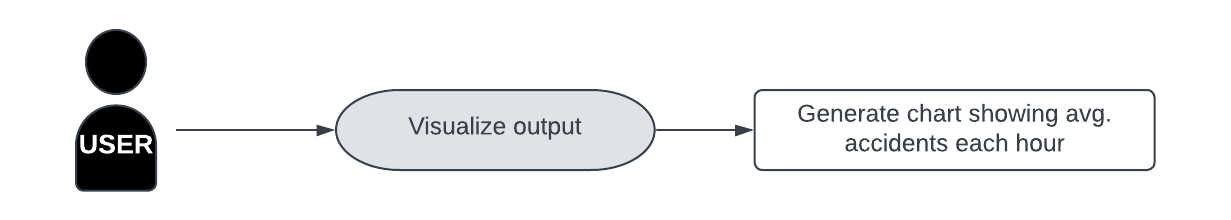
* 1. Use case diagrams

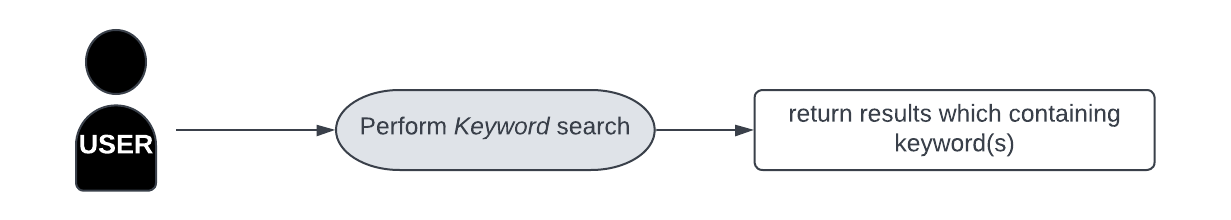


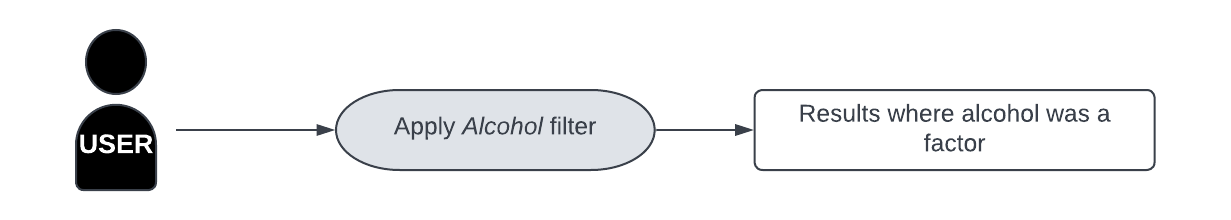


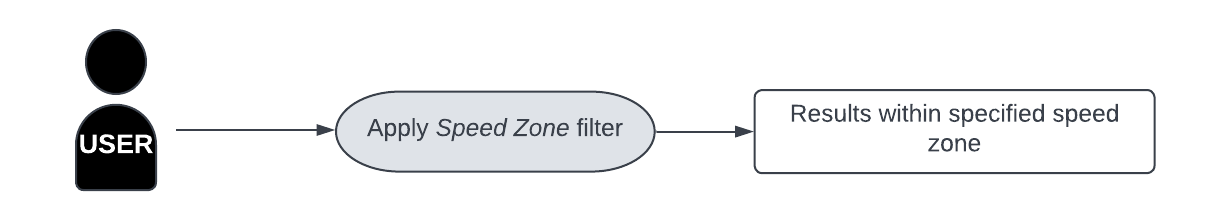


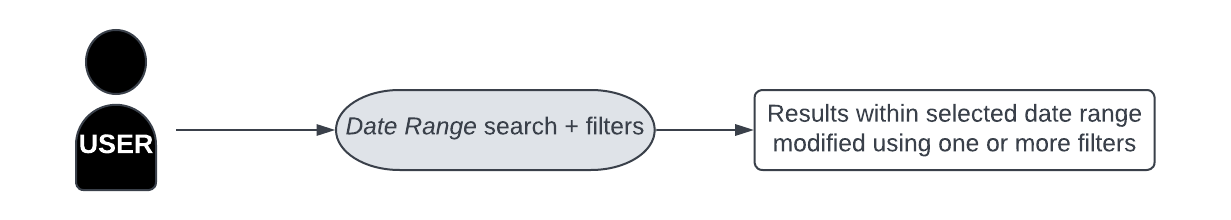












**Database Schema Development:**

|  |  |  |
| --- | --- | --- |
| **Table/s Name** | **Attributes** | **Type of Attribute** |
| Users | ID  Name | {Key}  {String} |
| Accident DataSet | OBJECTID  ACCIDENT\_NO  ABS\_CODE  ACCIDENT\_STATUS  ACCIDENT\_DATE  ACCIDENT\_TIME  ALCOHOLTIME  ACCIDENT\_TYPE  DAY\_OF\_WEEK  DCA\_CODE  HIT\_RUN\_FLAG  LIGHT\_CONDITION  POLICE\_ATTEND  ROAD\_GEOMETRY  SEVERITY  SPEED\_ZONE  RUN\_OFFROAD  NODE\_ID  LONGITUDE  LATITUDE  NODE\_TYPE  LGA\_NAME  REGION\_NAME  VICGRID\_X  VICGRID\_Y  TOTAL\_PERSONS  INJ\_OR\_FATAL  FATALITY  SERIOUSINJURY  OTHERINJURY  NONINJURED  MALES  FEMALES  BICYCLIST  PASSENGER  DRIVER  PEDESTRIAN  PILLION MOTORIST  UNKNOWN  PED\_CYCLIST\_5\_12  PED\_CYCLIST\_13\_18  OLD\_PEDESTRIAN  OLD\_DRIVER  YOUNG\_DRIVER  ALCOHOL\_RELATED  UNLICENCSED  NO\_OF\_VEHICLES  HEAVYVEHICLE  PASSENGERVEHICLE  MOTORCYCLE  PUBLICVEHICLE  DEG\_URBAN\_NAME  DEG\_URBAN\_ALL  LGA\_NAME\_ALL  REGION\_NAME\_ALL  SRNS  SRNS\_ALL  RMA  RMA\_ALL  DIVIDED  DIVIDED\_ALL  STAT\_DIV\_NAME | { Key }  {Index}  {Int} {String}  {Date}  {Time}  {String}  {String}  {String}  {String}  {String}  {String}  {String}  {String}  {String}  {String}  {String}  {Int}  {Float}  {Float}  {String}  {String}  {String}  {Double}  {Double}  {Int}  {Int}  {Int}  {Int}  {Int}  {Int}  {Int}  {Int}  {Int}  {Int}  {Int}  {Int}  {Int}  {Int}  {Int}  {Int}  {Int}  {Int}  {Int}  {String}  {Int}  {Int}  {Int}  {Int}  {Int}  {Int}  {String}  {String}  {String}  {String}  {String}  {String}  {String}  {String}  {String}  {String}  {String} |

**Class Diagram:**

|  |  |  |
| --- | --- | --- |
| **Users(s)** |  | **Visulisation\_Tool** |
| **- ID**  **- Name** |  |  |
| **+ Search()**  **+setDate()**  **+setChart()**  **+setKeywords()**  **+setTime()**  **+setCondition()**  **+saveChart()** |  | **+getDate()**  **+ generateChart()**  **+ KeywordsSearch()**  **+getTime()**  **+setTime()**  **+Physical Condition()**  **+Recommender()**  **+Display()** |