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| Safe roads - Staying safe - NSW Centre for Road Safety  Project Plan  NSW Traffic Penalty Tool | Authors  Brianne Byer s5175100  Wonwoo Choi  Marco Querzola  2810ICT Software Technologies  Trimester 2, 2022 |

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# Introduction

## Background

Road rules are essential to abide by, as each law protects the driver, passenger, and other bystanders. However, traffic penalties are enforced to encourage responsible driving further when a driver disobeys. New South Wales is one of Australia's more lenient states regarding driving rules and penalties. Compared to other Australian states, New South Wales has had the most road deaths in the last 12 months. The community should be aware of traffic penalty trends to avoid danger or offending themselves. While said data is available to the public, it is often displayed and manipulated in an unfriendly manner. Creating a tool that focuses on traffic penalties in New South Wales is necessary.

## Scope

The main deliverable of the project is a user-friendly data analysis and visualisation software called the “NSW Traffic Penalty Tool” (NTPT). NTPT will identify significant traffic penalty trends, such as offence type, offence location, time of offence and many other variables. It is important to note the tool will utilise one dataset called “Australia NSW traffic penalty data 2011-2017”. Therefore, the project is restricted to said dataset and unable to assess other datasets available online. While the public will be able to use the software, the target users will be the government agency Transport for NSW (TfNSW). TfNSW is responsible for major road infrastructure, licensing of drivers and registration of motor vehicles. The NTPT will be built with open-source resources; no costs are associated to the project. Documentation and other assets of the project are accessible within the designated GitHub repository. Planning documentation for the project will be finalised by the 4th of September 2022. NTPT is to be fully operational by the 9th of October 2022.

## Document Contents

The Project Plan document contains an Introduction, Work Breakdown Structure, Activity Definition and Estimation, as well as a Gantt chart for the NTPT. Within the Introduction, a high-level overview of the background, schedule, cost, and limitations of the NTPT are established. Secondly, a work breakdown structure will demonstrate the key deliverables of the NTPT. The Activity Definition and Estimation section explores the dependencies, critical paths, and float in each project activity. Additionally, a precedence diagramming method is displayed, with the purpose to visualise all required activities. Lastly, the Gantt chart presents the NTPT project schedule which includes the owner of each activity, estimated time of completion, real time of completion, milestones, and other useful information.

# Work Breakdown Structure



Figure – NTPT Work Breakdown Structure

Figure 1 displays the main deliverable, key phases, and their associated components for the NTPT. Each work breakdown structure has four levels: main deliverable, key phases, work packages and activities. A top-down approach has been incorporated in forming Figure 1, with the largest item and main deliverable being the data analysis and visualisation software. The key phases include initialisation, planning, testing, backend, frontend, updates and closing. Each phase must be completed for the project to be completed.

# Activity Definition & Estimation

Time management is a significant aspect of project management. To reduce risk, each activity for the NTPT must be acknowledged. Figure 2 represents each activities duration, start time, finish time, identification, and relationships. Refer to Table 1 for a detailed description of each activity.

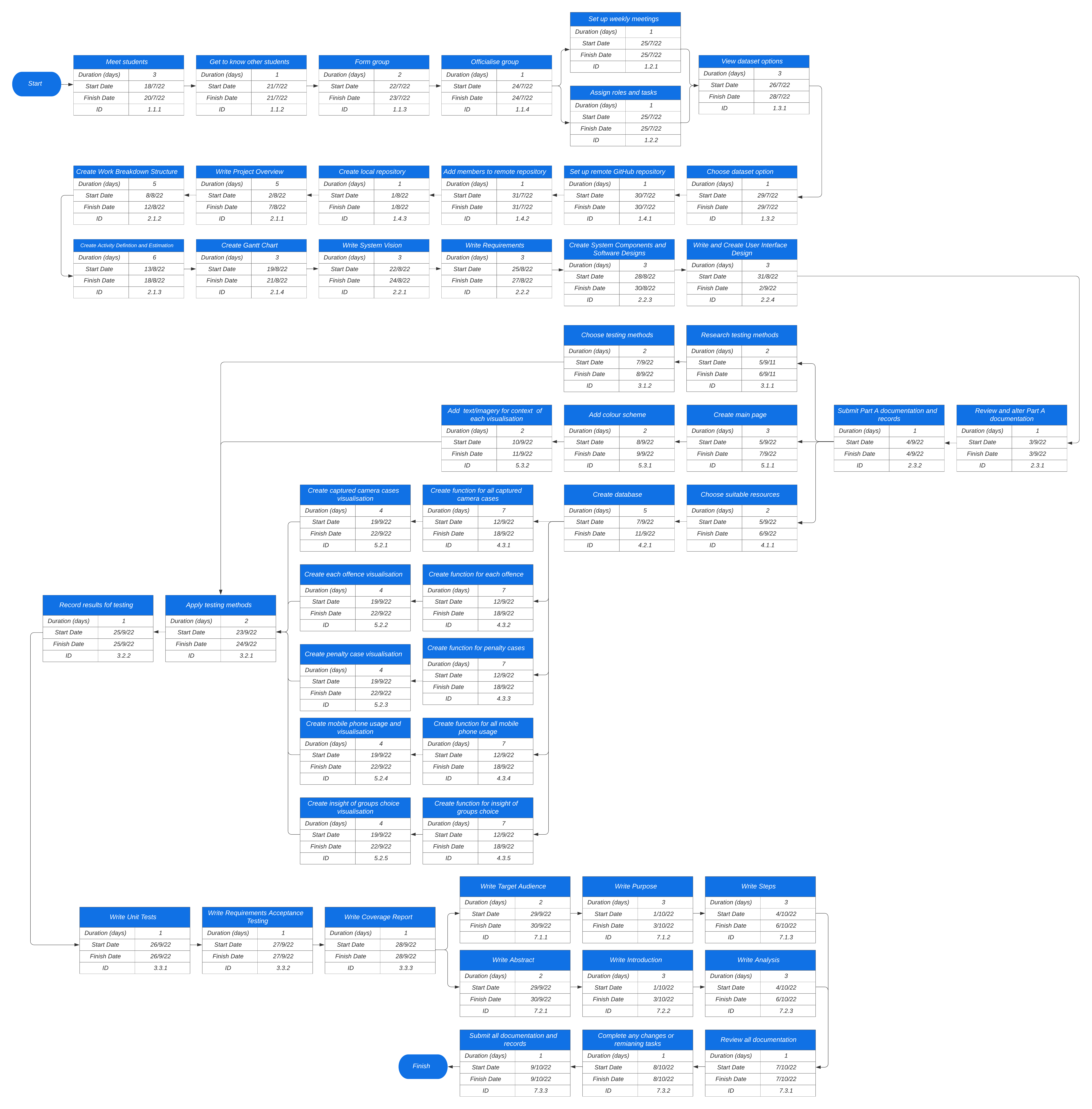


Figure – NTPT Precedence Diagramming Method

Table - Activity Description

|  |  |
| --- | --- |
| Activity | Description |
| 1.1.1 | Meet students from the online lectures, in-person labs, Microsoft Teams and other social media platforms. |
| 1.1.2 | Get to know other students by communicating online and in-person labs. Share information regarding career goals, current degree, and other relevant topics. |
| 1.1.3 | To form a group, expectations and goals must be discussed. Each student is to outline expectations of course (e.g. a grade of 7,6,5, or 4), time schedule and abilities. Expectations are agreed upon. |
| 1.1.4 | Students formalise a group on Blackboard. |
| 1.2.1 | Set up a weekly meeting according to discussing schedules and time constraints. This information was previously discussed in 1.1.2 and 1.1.3. |
| 1.2.2 | Assign tasks according to each students’ strengths, weaknesses, and skills they want to improve. This information was previously discussed in 1.1.2 and 1.1.3. |
| 1.3.1 | View dataset options by reading listed data sets. From each dataset, review individual website. |
| 1.3.2 | Group discusses dataset together, agrees on chosen dataset according interests. |
| 1.4.1 | Member of group to create a remote GitHub repository. This includes creating a GitHub account, creating repository, and selecting appropriate settings. |
| 1.4.2 | Member of group to add each member to remote Github repository. Members include student group and staff members (e.g. Gervase Tuxworth). |
| 1.4.3 | Each member of group (students) must pull repository onto their local machine. |
| 2.1.1 | Project Overview must be written for project. The background of the project must be researched and addressed. The scope of the project must be brainstormed and addressed. The contents of the document must be identified and identified. |
| 2.1.2 | Work Breakdown Structure of project must be created. Group (students) must brainstorm main deliverable, key phases, work packages and activities associated to the product. From the brainstorm, a diagram is formed. |
| 2.1.3 | Activity Definition and Estimation of project must be created. Each task required for the project is identified. Each task is assigned an identification number, an estimated duration and description. Optionally, the precedence diagramming method can be utilised. |
| 2.1.4 | From 2.1.3, a Gantt Chart can be formed. Each key phase, work package and activity is to be visually represented on the chart. |
| 2.2.1 | System Vision must be written for project. The problem background must be researched and addressed. The system overview is to be addressed. The potential benefits are to be addressed. |
| 2.2.2 | Requirements must be written for project. The user requirements must be researched and addressed. The software requirements are to be addressed. The use cases are to be identified and visually represented. |
| 2.2.3 | Software Design and System Components must be written for project. The software design will be shown visually through a flowchart. Functions, data structures and detailed design of the project, must be researched and addressed. |
| 2.2.4 | User Interface must be written a displayed visually for project. Research must be undertaken that supports structural design choices. The visual design wireframes will be created. |

# Gantt Chart

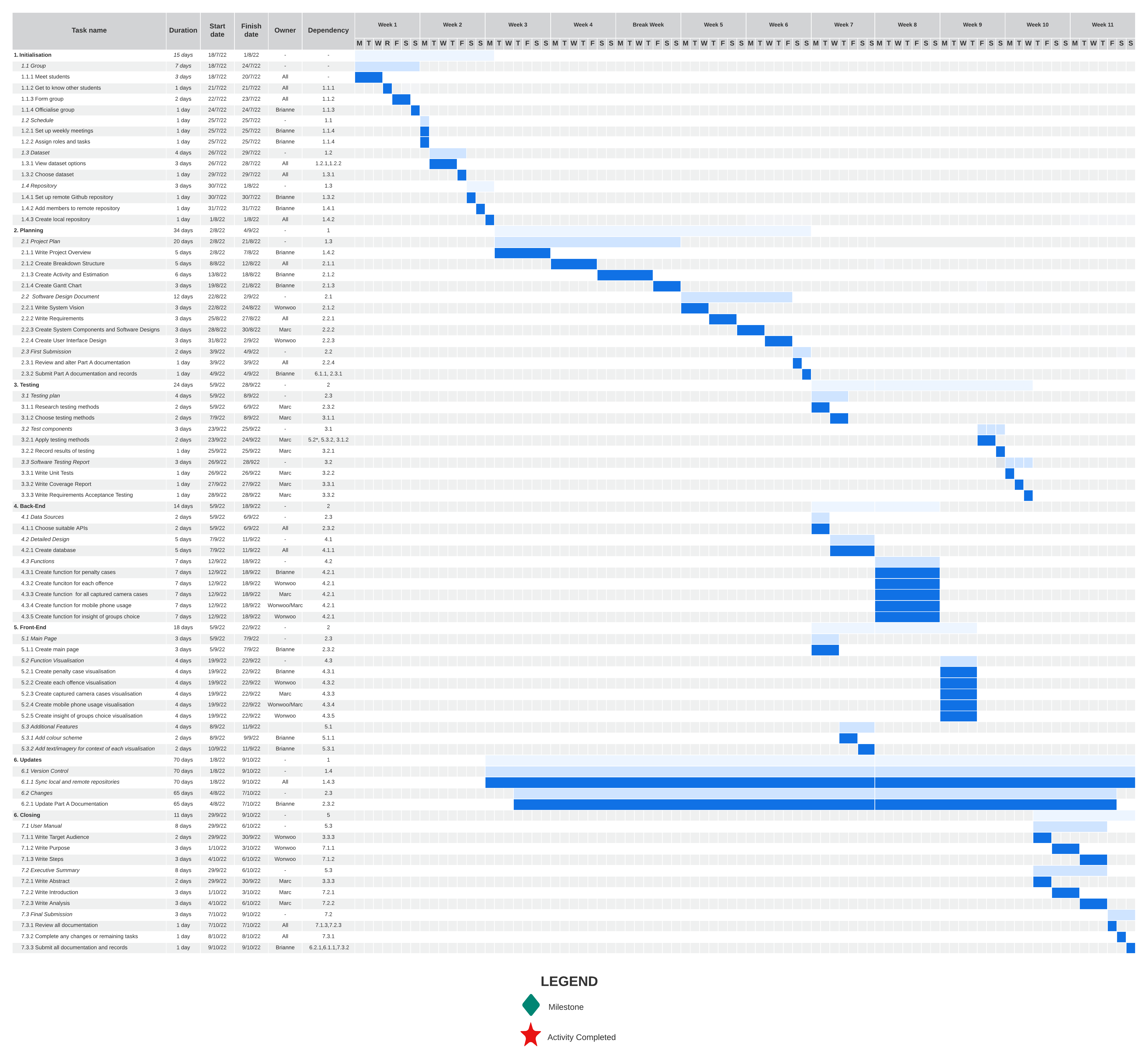


Figure – Gantt Chart

Need to add the REAL start time, time taken and finish of each activity at the end!