**Waterfall Development Model Justification**

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# Introduction

The waterfall model is a linear breakdown of the activities in a project, where each stage within the model relies on the previous stage to be completed. This model is simple and easy to understand and use. It is easy to manage due to the rigidity of the model. This means that each phase has specific requirements that need to be finished. In this model stages are worked on and completed one at a time, and these stages do not overlap. The waterfall model works well for smaller projects, like this one, where the requirements are clearly defined and very well understood. The waterfall model is an example of a Sequential model. In this model, the development of the project is divided into different stages, and each stage consists of a series of tasks working towards and overall completion of that stage. In the waterfall model, the development of one stage starts only when the previous stage is complete.

# Why is it used?

The waterfall model focuses very little on the end user or client involved with a project. Its main purpose has always been to help internal developers move more efficiently through the phases of a project, without having to consult the client until the end, which can work well for this project as the client only needs to see a working end product.

# Advantages of the model

* It allows for departmentalization and managerial control.
* Simple and easy to understand and use.
* Easy to manage due to the rigidity of the model – each phase has specific deliverables and a review process.
* Stages are processed and completed one at a time.

# Disadvantages of the model

* Once an application is in the testing stage, it is very difficult to go back and change something that was not well-thought out in the design stage.
* No working software is produced until late during the life cycle.
* High amounts of risk and uncertainty.
* Not a good model for complex and object-oriented projects.
* Poor model for long and ongoing projects.
* Not suitable for the projects where requirements are at a moderate to high risk of changing.

# Why is this model good for this project?

The waterfall model is the best model for the digital driving logbook as the linearity of this model works best to get the desired outcome of the project. The clients (Learning drivers & VicRoads) do not need to see the product during development stages, only when the product is finished. This allows the project to move through development stages more quickly and efficiently. This model is used only when the requirements are very well known, clear and fixed. The model works because the product definition is stable, the technology is understood, there are no extremely challenging requirements, resources with required skills are available and the project is relatively short.