**Justification of development model; Waterfall model**

Agile model, what is it?

The Agile model is a software development life cycle model that begins the project with an analysis phase. The project is developed over the course of several sprints, each of which is a brief time period with its own stages of planning, designing, creating, testing, reviewing, and launch. Each sprint is overseen by a Scrum Master, and after it is over, the final product is submitted to the customer for assessment and debate of what should be added next. Typically, the first sprint of a project entails developing the fundamental elements needed for the project to operate at a fundamental level, with following sprints adding more functionality. There are several benefits to using an agile approach in the creating of the driving instructor manager website, Firstly, gathering client feedback throughout the project is essential and as the project has a vast range of potential features, the feedback will surely help in determine which features should be prioritized or ignored during each sprint of the project, this is similar to the spiral model, and diverges from the linear progression of the waterfall model. However the disadvantage of using an agile model for the development of the driving instructor website could be the lack of clear documentation, which may make it difficult for new team members to understand the project's history and progress.

Spiral model, What is it?

The spiral model, is an iterative approach that includes an initial analysis phase, a risk identification phase, a development/testing phase, and a planning phase for the next iteration. This cycle is continued with increasing scope and cost until a Minimum Viable Product (MVP) is established. The spiral approach focuses on risk reduction by repeatedly building on prior iterations and undertaking a lengthy risk analysis throughout each iteration. The spiral model allows for more flexibility than the waterfall model, the risks can be identified and addressed early, but its good for large and complex projects where in my scenario I’m alone by myself with mild complexity on the project, The spiral model can also be time-consuming and may be more difficult to understand and use than other models which would cause errors and cost time which is also expensive.

Finally the waterfall model, What is it?  
The Waterfall model is a software development life cycle model that differs greatly from the Agile model. At the beginning of the project, there is a lengthy period of analysis to identify all of the client's requirements and needs, without any feedback expected during the project. After the analysis is complete, the project follows a sequential production process of design, implementation, testing, and maintenance, where each stage must be completed before the next stage can begin, and no stages can be revisited or modified. The client does not provide any feedback during the solution's production, with the only interaction being to receive the final product and provide feedback on it. Firstly, the waterfall model is easy to understand and use and is good for small projects with clearly defined requirements with and progression through the stages is straightforward, however the flexbibility for changes or revisions are limited and you cannot go back after completing a stage which is risky another weakness to waterfall is that evaluation or testing is only performed at the end, which can lead to issues being discovered late which is definitely not the best time to be discorving new errors and finally it does not allow for client feedback during the development process which may hurt the clients wants.

With all 3 models being said, My final decision comes down to the waterfall model, I believe that the waterfall model is the most beneficial to my DrivingManager project. The waterfall model is best as itself is a simple model which works great with the project I am doing, the requirements I have been tasked to do are straight forward and hard to mess up, as long as I have the code and everything working which shouldn’t be diffuclut if I have understanding in the language.