V-Model & Waterfall Model – How They Are Similar and How They Contrast

Similarities-

- The V-Model is an extension of the Waterfall Model.
- Both the V-Model and the Waterfall Model start from left to right.
- The Waterfall Model and the V-Model both have the same steps and both require them to be completed in the same order. Ex: Requirements, Design, Implementation, Verification and Maintenance.

Differences-

- Unlike the Waterfall Model, activities formed within the V-Model are vent into a "V" like shape.
- Unlike the V-Model, the activities formed within the Waterfall Model are carried out as soon as the development activities are completed.
- It's also stated that the number of defects in the software made in the V-Model are less than that of the Waterfall Model.

The Waterfall Model – My Summary

SDLC, standing for "Software Development Life Cycle," is often used for software project management by planning out each stage that is required and completing them one by one. The Waterfall Model is a SDLC that is used quite often and is known to be the very first SDLC ever created. It is also referred to as a linear-sequential life cycle model. Not only is this model the first SDLC to have ever been introduced, but it is also very simple and easy to use. Like any other SDLC, the Waterfall Model has its fair share of stages to complete. For one stage to be completed, the stage before it MUST be completed first, else it won't work. In order to get the best results out of this model, it's best to use it for smaller projects with no extra requirements, being that it is a simple model and not a complex one. Once a phase is completed it will be reviewed in order to determine whether or not the project should continue or to be discarded. Phases do not overlap with this model since they are processed and completed all at once.

Here are some advantages of a Waterfall Model:

- Model is simple and easy to use
- Good for managing since the model is rigidity
- No overlapping will occur since all phases are completed one at a time
- Works best for smaller projects and is a great starter model to use

Here are some dis-advantages of a Waterfall Model:

- It is difficult to go back and change something once you have entered the testing stage of this model
- There are high risks to be taken into consideration before using this model
- Doesn't work well with complex projects
- Doesn't work well for long or ongoing projects

Summary: The Waterfall Model seems like a great model to use judging by the simplicity of its uses, but we should also note that it can be very risky, especially if using this model for complex or ongoing projects, so it's best to use this model for small and short projects, possibly starter projects.

The V-Model – My Summary

The V-Model stands for "verification" or "validation" model. This model takes on the form of the letter "v." The V-Model was created as an extension of the Waterfall Model. Similar to that of the Waterfall Model, the V-Model also requires that the first stage must be completed in order to proceed to the next stage. In order to use this model, you must start from the top left-hand side of the "v," work your way down and work your way back up to the top right-hand side of the "v."

Here are some advantages of using the V-Model:

- Similar to the Waterfall Model, the V-Model is simple and easy to use
- Planning and designing happen before coding, making this model very resourceful and increases the chance of success
- Works best for smaller projects
- Great at finding defects in earlier stages

Here are some disadvantages of using the V-Model:

- Not very flexible and can be rigid
- Early production of software will not be used since software is developed through the implementation phase

- Test documents will have to be updated each time there are changes throughout the model

Summary: The V-Model seems like a great model to use. Like the Waterfall Model, it's best to use this model for simple projects, but unlike the Waterfall Model, this model can be used for medium sized projects since you are able to go back and make changes, just be sure to update as you go.