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MS. SHWETA TIWARI
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SPM
SOFTWARE PROJECT MANAGEMENT

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By SHWETA TIWARI

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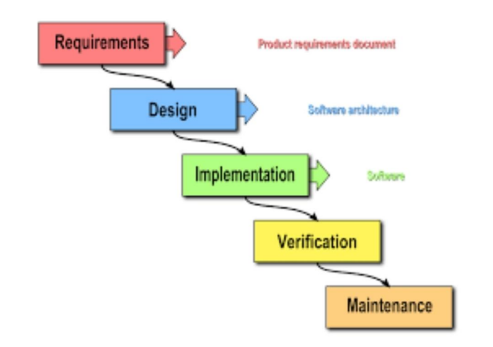
System Development Life Cycle: Waterfall Model

Feature Waterfall Model

1. the simplest classical model.
2. Ideal model.
3. others model based on this model .
4. non-iterative model.
5. The waterfall model is the first model of software engineering.
6. The waterfall model works like a linear – sequential life cycle model.
7. This model is very simple. Its easy to understand and use. In this model, the second phase starts only after one phase is completed.
8. It is also called the classical life cycle model.



Working of waterfall model

The steps that flow in the software development life cycle are all there. All the steps of the waterfall model come in the software development life cycle.
The second phase starts only after all phase one of the waterfall model is completed. That's why it is called the linear squamation model.

Requirement analysis

In this phase we first identify the requirement from the customer (user). And then it is checked whether it is feasible or not, we check its validity whether we can implement it or not. There is a validity and feasibility check for it. After completing this phase, the next phase starts.

Designing

In this phase the software is designed according to the requirements of the software which we have to develop.

Development and Implement

The programming of the software is done as per the design in this phone. And the software is made.

Testing

After the programming is complete, the software testing phase is the starter. And it is seen whether the software is working according to the requirement of the customer (user) or not.

Deployment

Talking about deployment in simple words, it means going to the user and installing the software. And the user is told about how to use and use features.

Maintenance

Maintenance means if there is any change in the software, then the use has to be improved.

The waterfall model cannot be used practically in product development. Because there was a requirement analysis in it, after that now we went to the design phase, after that it was found that there was an error in the requirement analysis. Now we cannot correct those errors by going to the requirement analysis phase by going to the design phase. If an error occurs, then we have to start the whole process again. That's why this model is used as the only ideal model. Do not do it for software development.

To remove this drawback, an iterative waterfall model was created in which this solution is given. That if an error occurs, then the use can be corrected again.

Advantage of waterfall model

1. It is easy to use and understand the waterfall model.
2. In this model, only after one phase is completed, the second phase starts.
3. All the requirements should be correct, if any error comes then there will be error in all other phases. So there will be clearly outlined projects. For those whose requirement will be clear, this help can be full.

Disadvantage of waterfall model

1. not used for big projects.
2. It cannot be changed according to the requirement, hence it is a little flexible, once whatever has happened, you will start working on it, you cannot change it.
3. Once the phase is complete, the father cannot go back.
4. Until the whole life cycle is completed. Till then the phase form requirement and maintenance are not done. Till then our working model will not be ready.
5. **Requirement :-** This model is applicable to those requirements which we can understand well.
6. **Risk:-** There is a high risk in the waterfall model.
7. There is no user communication.
8. It is very difficult to change this model. If you want to change then all the phases have to be started again.
9. **Availability of model: -** In this, when all the phases of the software life cycle are completed. Then get the working model.

When should one use the Waterfall model?

- The Waterfall Model is used only when the requirements are well understood, well defined.
- There are no prerequisites that are unclear.
- There are many resources available for free when the project is not lengthy and with the necessary skills.
- Design modifications are often quite expensive in the construction and construction industries.
- When there is a need to prepare and adhere to a precise time frame without any deviations.