(SPM) PERIOD 1
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SPM
SOFTWARE PROJECT MANAGEMENT

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What is a Software Process Model?

Definition of Software Process Model:- The set of activities done to develop a software is called Software Process Model or Software Process Model.
Software process models range from analyzing the requirements of a software product to designing (the process of writing algorithms and flowcharts), programming (the process of writing code) and testing (the process of finding faults in the software). And installation (the process of installing the software in its actual environment) is all divided into different

well-defined steps, so that the task of software creation becomes very easy.

As you know, in a large software project, many people work together in which people with many different abilities and expertise like system analyst (system analyst), software engineers (software engineer), software testers (software tester) are involved. live. The Software Process Model divides the work of all the people involved in the project into different phases so that all the people involved in the project know when to start their work.

Phases of Software Process Model

Four Phases of Software Process Model in Hindi:- Software Process Model divides the process of development of any software into four different phases, that phase is as follows:-

1. **Specification :-** In this part a team of System Analysts analyzes the requirements of the customer and defines what work should be done by the software system.
2. **Design and Implementation:-** In this phase the software is designed like algorithms, flowchart etc. After that the source code of the program is written.

3. **Verification and Validation:-** Under this step the errors present in the software are corrected and its protective capabilities, data backup and recovery capability etc. are checked. After that it is also ensured whether the system is capable of fulfilling the requirement of the customer or not.
4. **Maintenance:-** No software system is permanent. According to the changing needs of the market, the requirements of the customer also keep on changing and there is a need to make new updates or changes in the system continuously to meet these changing needs.

Difference Between Software Development Life Cycle and Software Process Model

Sometimes Software Process Model is also known as Software Development Life Cycle or SDLC but if we look deeply, there is a lot of difference between these two. Software development life cycle describes many different methods or methodologies such as Spiral Model, Incremental Development Model, Waterfall Model etc. is divided, Which is very important to follow for software development. In fact, in different models of SDLC or

software development life cycle, the same four phases of the software process model are used.
Some of the major Software Development Models that come under SDLC are as follows:-
Waterfall Model:- The waterfall model is the oldest widely used model of SDLC. In this, the entire process of software development is divided into several different stages. The result of one step serves as the input to the next step. It is generally used in small and simple projects. This model makes it very difficult to go back and make any modifications to the same phase once a phase is completed, so the waterfall model is not used in complex projects in which the product requirements change very rapidly.
Iterative Model:- In the iterative model a process of software development is divided into several different modules or versions. In its first version, a complete software product is made based on certain requirements. In subsequent modules, the product is updated by adding some more new requirements to the same software and this process is repeated until the complete software is ready.

Agile Model:- In the Agile model, the process of building a software product is accomplished in several different versions. Improvements are made in subsequent versions based on the feedback received from its first version. It is a very fast working model with the first version being built and released very quickly. Agile model is used to develop software when the requirements of the customer keep on changing as per the changing market conditions.

Spiral Model:- It is a hybrid model that allows two SDLC models to be combined together in a project. Usually, the waterfall model and iterative model are used together in this.

Big bang model :- In the Big bang model the process of coding is started without any planning. During the construction process, an effort is also made to understand when the work is being done for a requirement. This method is beneficial for a small project with a low budget, as it can save time and money in planning.

V-Model: - It is also called Verification and Validation model. In this model, on the one hand the process of development of the software goes on and on the other hand the work done during the process of development is

tested or tested. That is, the design that is made in the process of development or the program code that is written is also tested simultaneously.