Incremental Model: SDLC (software development life cycle)

What is an Incremental Model?

<u>Definition of Incremental Model:-</u>

- Software is a process to develop.
- Inside which the development of the software is done by dividing it into different parts.
- In incremental development, software is developed in different parts like design, implementation, testing, coding.

- According to the iteration requirements of this model, each part of the software undergoes testing, coding, design, implementation.
- In this, some basic features are developed to develop the software in the starting phase so that the project can be developed easily.
- After that the feedback is taken from the customer.
- After that in the second phase, some models are developed and combined with the project.
- These processing work till the project is developed as per the requirements of the customer.

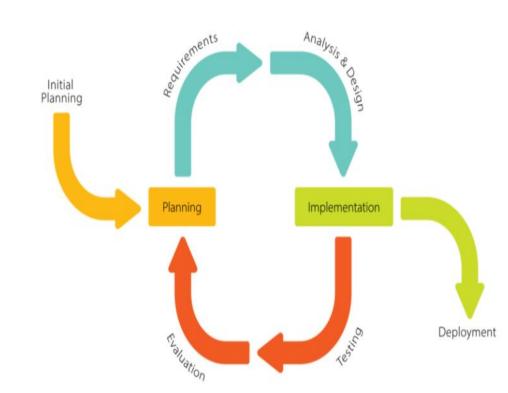
When to use in Incremental Model

- This model is used the most there, when the customer does not know your requirement properly and is changing according to the time,
- then the Incremental Model is used to develop the project.
- If this model is used in project development, then a prototype of the project is found at the very beginning of the customer.
- Which helps the customer to develop the project according to his requirement.
- If you want to develop a project quickly using this model, then you should know all your requirements in advance.

Phoses:

1. Requirement analysis:

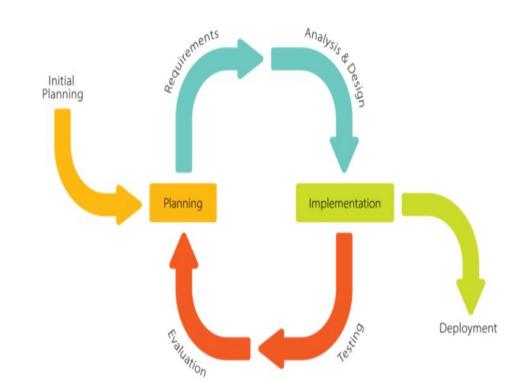
- In the first phase of the incremental model,
- we analyze the requirements of the project and identify what are the basic requirements of the project.
- And all the working requirements of the project are understood by the team.
- The first phase of developing any project through an incremental model is very important.
- Because in this phase itself we analyze the requirements and all the basic needs of the project.



Phases:

2. Design & Development:

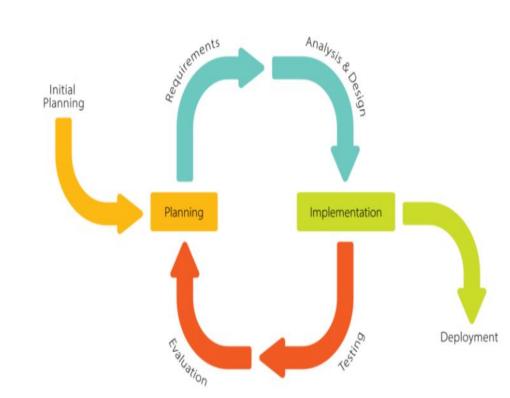
 Within this phase, we are designing the functionality of the incremental model project from software development, life cycle, and the process of developing the project.



Phases:

3. Testing:

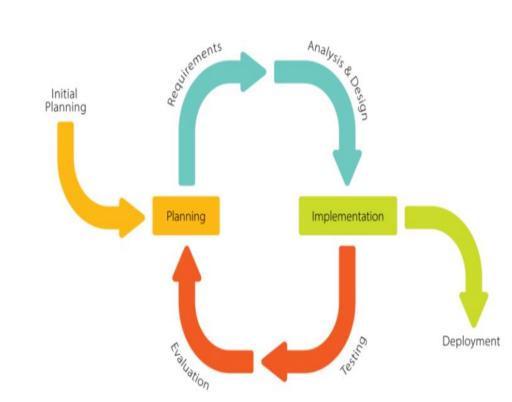
- Within this phase, the incremental model is tested for all those functions as well as all those functions which have additional functionality.
- Many methods are used to test all those functionality inside the testing phase.



Phases:

4. Implementation:

- When we do coding or develop coding inside the implementation phase.
- In this we do not include your coding, design.
- And while testing, we test all the functionality of the project.
- After completing this phase, we upgrade all the functions of the project.



<u>Characteristics Incremental Module</u>

- In this model the requirements are the most important. Because in this we develop the project according to the requirements.
- Through incremental mode, we can easily develop a lengthy project.
- We use this model when we do not have good engineers.
- One of the reasons for using this model is also when the costumes are very quick to develop the project.

<u>Characteristics Incremental Module</u>

- When we do project development work using this model, then we divide all the parts of the project into different small parts, which helps in developing the project in less time.
- Under this model, the basic requirement of the project is developed in the first phase, which helps in developing the project.
- Within this model, all the parts of the project that are divided are independent.

<u>Advantage of Incremental Model</u>

- If we use this model in project development, then it is quite easy for us to recognize the errors.
- Testing and debug of the project also becomes very easy.
- The incremental model is very flexible.
- When you do not have expert software engineering.

<u>Advantage of Incremental Model</u>

- Within this model, we can easily manage the risk because iteration happens again and again.
- The costume gets a prototype of the project in the beginning itself.
- In the first phase under the incremental model, there is less time and cost effective in developing the basic requirements of the project.

<u>Disadvantage of Incremental Model</u>

- Good planning is required to use this model.
- The total cost to develop the project through an incremental model is a lot.
- A well defined module interface is needed to work in this model.
- This model is quite easy to start. In this, as we keep adding functions according to the requirement, problems start to come in understanding the architecture of this model.