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What is Incremental model- advantages, disadvantages and when to use it?

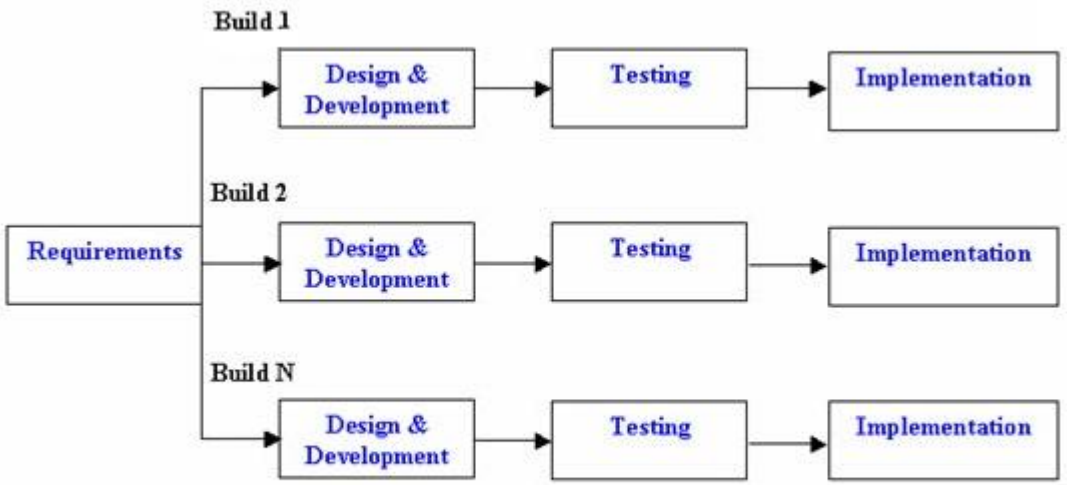
In incremental model the whole requirement is divided into various builds. Multiple development cycles take place here, making the life cycle a **"multi-waterfall" cycle**. Cycles are divided up into smaller, more easily managed modules. Incremental model is a type of software development model like **V-model**, **Agile model** etc.

In this model, each module passes through the requirements, design, implementation and **testing** phases. A working version of software is produced during the first module, so you have working software early on during the **software life cycle**. Each subsequent release of the module adds function to the previous release. The process continues till the complete system is achieved.

For example:

In the diagram above when we work **incrementally** we are adding piece by piece but expect that each piece is fully finished. Thus keep on adding the pieces until it's complete. As in the image above a person has thought of the application. Then he started building it and in the first iteration the first module of the application or product is totally ready and can be demoed to the customers. Likewise in the second iteration the other module is ready and integrated with the first module. Similarly, in the third iteration the whole product is ready and integrated. Hence, the product got ready step by step.

Diagram of Incremental model:



Incremental Life Cycle Model

Advantages of Incremental model:

- Generates working software quickly and early during the software life cycle.

- This model is more flexible – less costly to change scope and requirements.
- It is easier to test and debug during a smaller iteration.
- In this model customer can respond to each built.
- Lowers initial delivery cost.
- Easier to manage risk because risky pieces are identified and handled during it'd iteration.

Disadvantages of Incremental model:

- Needs good planning and design.
- Needs a clear and complete definition of the whole system before it can be broken down and built incrementally.
- Total cost is higher than waterfall.

When to use the Incremental model:

- This model can be used when the requirements of the complete system are clearly defined and understood.
- Major requirements must be defined; however, some details can evolve with time.
- There is a need to get a product to the market early.
- A new technology is being used
- Resources with needed skill set are not available
- There are some high risk features and goals.

Some other models that you must read about:

1. Waterfall model
2. V model

3. RAD model
4. Agile model
5. Iterative model
6. Spiral model
7. Prototype model

Other popular articles:

- What is Iterative model- advantages, disadvantages and when to use it?
- What is Waterfall model- advantages, disadvantages and when to use it?
- What is V-model- advantages, disadvantages and when to use it?
- What is Prototype model- advantages, disadvantages and when to use it?
- What is Agile methodology? Examples, when to use it, advantages and disadvantages

Filed Under: Testing throughout the testing life cycle

Tagged With: advantages, advantages of Incremental model, Diagram of Incremental model, disadvantages, disadvantages of Incremental model, Incremental model, multi-waterfall cycle, when to use Incremental model

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Comments

diego del angel says

April 17, 2018 at 8:23 pm

excelent information.

Reply

joy chaulo says

March 27, 2018 at 9:56 pm

very informative information. I like it.

Reply

Muhumuza Adam says
March 14, 2018 at 1:33 pm

I can't really understand coz as if the incremental model is the same as prototyping method. I can see they both have a prototype and an iterative process

Reply

sseko rovaghii says
February 23, 2018 at 2:04 pm

hey you are good tutor,I love the way you are doing it to us,bravo man....continue giving us things like this. thank you

Reply

Seriki says
February 7, 2018 at 4:56 pm

Sdlc was not explained very well to me in the school and now I want to know it better pls how can you help me

Reply

shivani rajendra bhadane says
January 14, 2018 at 5:01 pm

helpful information.....thanx for your help

Reply

charles mulelu says
July 15, 2017 at 6:52 pm

please assist me with books which has the incremental development life cycle . iam doing my project .i want to use it as my methodology.

Reply

pakalapati.Issac Paul Son says

July 1, 2017 at 11:25 am

extrodinary information..... tnx fr ur kind love towards students.....good information keep it up...

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