

ISTQB EXAM CERTIFICATION

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

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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:



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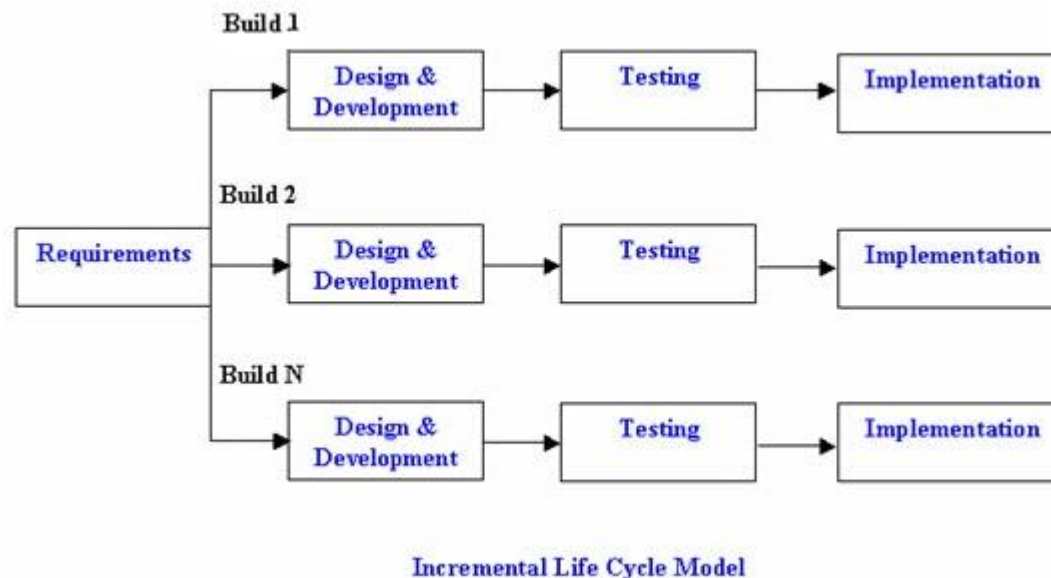
ISTQB CERTIFICATION EXAM STUDY MATERIAL

Chapter 1. Fundamentals of testing

[What is Software testing?](#)[Why is testing necessary?](#)[Software testing objectives and purpose](#)[What is Defect or bugs or faults?](#)[What is a Failure?](#)[From where do Defects and failures arise?](#)[When do defects arise?](#)[What is the cost of defects?](#)[Defect or Bug Life Cycle](#)[What is the difference between Severity and Priority?](#)[Principles of testing](#)[Fundamental test process](#)[Psychology of testing](#)[Independent testing- it's benefits and risks](#)

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:



Advantages of Incremental model:

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

Software Quality

Chapter 2. Testing throughout the testing lifecycle

What is Verification?

What is Validation?

Capability Maturity Model (CMM-Levels)

Software Development Life Cycle

Software Development Life Cycle (SDLC) phases

Software Development Models

Waterfall model

V-model

Incremental model

RAD model

Agile model

Iterative model

Spiral model

Prototype Model

Software Testing Levels

Unit testing

Component testing

Integration testing

Big Bang integration testing

Incremental testing

- 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**

Component integration testing

System integration testing

System testing

Acceptance testing

Alpha testing

Beta testing

Software Test Types

Functional testing

Non functional testing

Functionality testing

Reliability testing

Usability testing

Efficiency testing

Maintainability testing

Portability testing

Baseline testing

Compliance testing

Documentation testing

Endurance testing

Load testing

Performance testing

Compatibility testing

Security testing

Scalability testing

Volume testing

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



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Stress testing

Difference between Volume, Load and stress testing in software

Recovery testing

Internationalization testing and Localization testing

Confirmation testing

Regression testing

Structural testing

Maintenance Testing

Impact analysis

Chapter 3. Static Techniques

Test design techniques

Static test technique

What is static Testing?

Uses of Static Testing

Informal reviews

Formal reviews

The roles and responsibilities of the moderator, author, scribe, reviewers and managers involved during a review

Types of review

Walkthrough

Technical review

Inspection



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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.

[What is static analysis?](#)

[What is a static analysis tools?](#)

Chapter 4. Test design techniques

[Test analysis](#)

[Traceability](#)

[Test design](#)

[Test implementation](#)

[Test design technique](#)

[Categories of test design techniques](#)

[Static testing techniques](#)

[Dynamic testing technique](#)

[i. Black box testing or Specification-based](#)

[Equivalence partitioning \(EP\)](#)

[Boundary Value Analysis \(BVA\)](#)

[why it is important to do both EP and BVA](#)

[Decision tables](#)

[State transition testing](#)

[Use case testing](#)

[ii. White box testing or Structure-based](#)

[iii. Experience-based testing](#)

[Error guessing](#)

[Exploratory testing](#)

[Structure based technique](#)

[Test coverage](#)

[Where to apply this test coverage?](#)

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

Why to measure code coverage?

How we can measure the coverage?

Types of coverage

Statement coverage

Branch Coverage or Decision Coverage

Condition coverage

How to choose that which technique is best?

Chapter 5. Test management

Roles and responsibilities of a Test Leader

Roles and responsibilities of a Tester

Purpose and importance of test plans

Things to keep in mind while planning tests

What testing will involve and what it will cost?

Estimation techniques

Factors affecting test effort

Test strategy

Test monitoring

Test control

Configuration management

Risks in software testing

Product risk

Project risk

Risk-based testing

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

Risk analysis

Incident management

Incident logging Or How to log an Incident

What are incident reports?

How to write a good incident report?

What is test status report?

Chapter 6. Tool support for testing

Types of test tools

Tool for management of testing and tests

Test management tools

Requirements management tools

Incident management tools

Configuration management tools

Static testing tools

Review process support tools

Static analysis tools (D)

Modelling tools (D)

Test specification tools

Test design tools

Test data preparation tools

Test execution and logging tools

Test execution tools

Test harness/ Unit test framework tools (D)

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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Test comparators

Coverage measurement tools (D)

Security tools

Performance and monitoring tools

Dynamic analysis tools (D)

Performance testing, Load testing and stress-testing tools

Monitoring tools

Advantages and benefits of using testing tools

Disadvantages and risks of testing tools

Factors for software testing tool selection

Proof-of-concept or piloting phase for tool evaluation

PERFORMANCE TESTING

[JMeter Tutorial](#)[LoadRunner Tutorial](#)

TRENDING POSTS

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Tool support for testing (22)



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