UNIVERSITY OF CALOOCAN CITY
COMPUTER ENGINEERING DEPARTMENT

Software Design

V Model

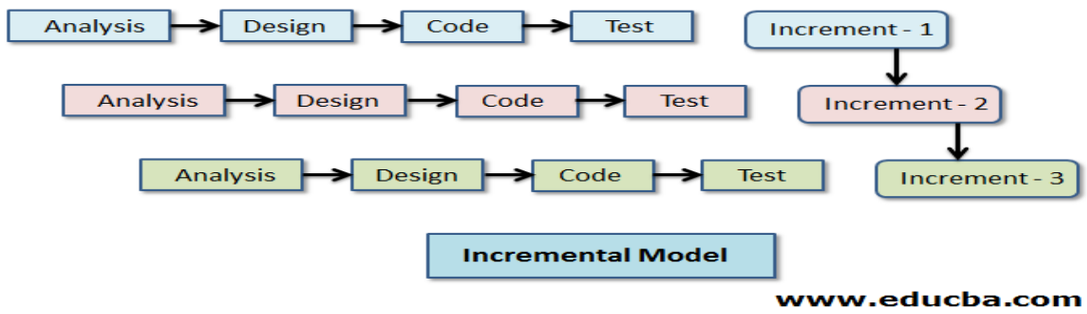
Storyboard

Submitted by:
Caasi, Karl Benedict
Mamanao, Kurt Marwin M.
Monoy, Justin Rhey
Poliño, Justine
Ramos, Jan Lawrence M.
Vasig, Yuan Hessed
Uy, Junichiro H.

Instructor:
Engr. Maria Rizette H. Sayo

December 13, 2025

INTRODUCTION



Incrementa l Model

Software development methodologies define structured approaches for planning, developing, and maintaining software systems. Traditional models such as the Waterfall Model follow a linear process, which may not be suitable for projects with evolving requirements. The Incremental Model addresses this limitation by breaking the software into smaller modules and developing them in increments. Each increment adds functionality to the existing system until the final product is completed.

Overview of Incremental Model

The Incremental Model divides the system into multiple increments. Each increment is developed through a complete SDLC cycle including requirement analysis, design, implementation, testing, and deployment. After each increment, a working version of the software is delivered to the customer for feedback.

Phases of the Incremental Model

3.1 Requirement Analysis

Requirements are identified and divided into smaller functional units. Core requirements are developed first, while additional features are planned for later increments.

3.2 System Design

Overall system architecture is designed initially. Detailed design is carried out for each increment separately.

3.3 Implementation

The software is developed increment by increment. Each module is coded and integrated with the existing system.

3.4 Testing

Testing is performed for each increment to ensure that new functionality works correctly and does not affect previously developed features.

3.5 Deployment and Maintenance

After successful testing, each increment is delivered to the customer. Feedback is collected and improvements are incorporated in subsequent increments.

Advantages of the Incremental Model

- Early delivery of working software
- Easier testing and debugging
- Flexible to requirement changes
- Risk is reduced by developing in smaller parts
- Customer feedback can be incorporated frequently

Disadvantages of the Incremental Model

- Requires good planning and design
- Integration of increments can be complex
- Integration of increments can be complex
- Integration of increments can be complex

Applications of Incremental Model

- Large and complex systems
- Projects with clearly defined core requirements
- Software requiring frequent updates
- Web applications and enterprise systems

Conclusion

The Incremental Model is an effective SDLC approach for projects requiring flexibility and early delivery. By dividing the system into manageable increments, development becomes more structured and less risky. Although it requires careful planning and integration, the benefits of early feedback and reduced risk make it a popular choice in modern software development.