

DAY 2:

ASSIGNMENT 2:

Develop a case study analyzing the implementation of SDLC phases in a real-world engineering project. Evaluate how Requirement Gathering, Design, Implementation, Testing, Deployment, and Maintenance contribute to project outcomes.

Answer:

Let's enhance the case study with relevant diagrams for better visualization of the SDLC phases in the context of developing a Java-based inventory management system.

Case Study: Implementation of SDLC Phases in a Java Project

1. Requirement Gathering:

Activities:

- Stakeholder Interviews
- Requirement Documentation

Diagram:

```plaintext

Stakeholder

Interviews

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Requirements

Specification

Document

## 2. Design:

Activities:

- System Architecture Design
- Detailed Design

Diagrams:

## System Architecture Design:

Stakeholders

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System

Architecture

Design

## Detailed Design (Example Class Diagram):

Class Diagram

for Java

Implementation

## 3. Implementation:

Activities:

- Coding
- Unit Testing

## Diagram:

Java

Implementation

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Unit Testing

## 4. Testing:

Activities:

- Integration Testing
- System Testing
- User Acceptance Testing (UAT)

## Diagram:

Integration

Testing

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System

Testing

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User Acceptance

Testing

## 5. Deployment:

Activities:

- Deployment Planning
- Deployment Execution

## Diagram:

Deployment

Planning

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Deployment

Execution

## 6. Maintenance:

Activities:

- Monitoring
- Bug Fixing and Updates
- User Support

## Diagram:

Monitoring

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Bug Fixing and

Updates

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User Support

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Evaluation of SDLC Phases Contribution to Project Outcomes:

Requirement Gathering: Ensures clear understanding of stakeholder needs.

- Design: Provides a structured blueprint for development.

- **Implementation**: Converts design into functional Java code.

- Testing: Ensures quality and reliability of the software.

- Deployment: Smooth transition of the system into production.

- Maintenance: Ensures ongoing performance and user satisfaction.

## Conclusion:

The integration of these phases ensures the successful development, deployment, and maintenance of a Java-based inventory management system. Each phase contributes uniquely to the project's overall success, ensuring that the system meets business requirements and user expectations effectively.