

SNS COLLEGE OF TECHNOLOGY

Kurumbapalayam (Po), Coimbatore – 641 035

An Autonomous Institution

Accredited by NAAC – UGC with ‘A++’ Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

**COURSE NAME: 23IT0201 SOFTWARE TESTING
(OPEN ELECTIVE)**

III YEAR / VI SEMESTER

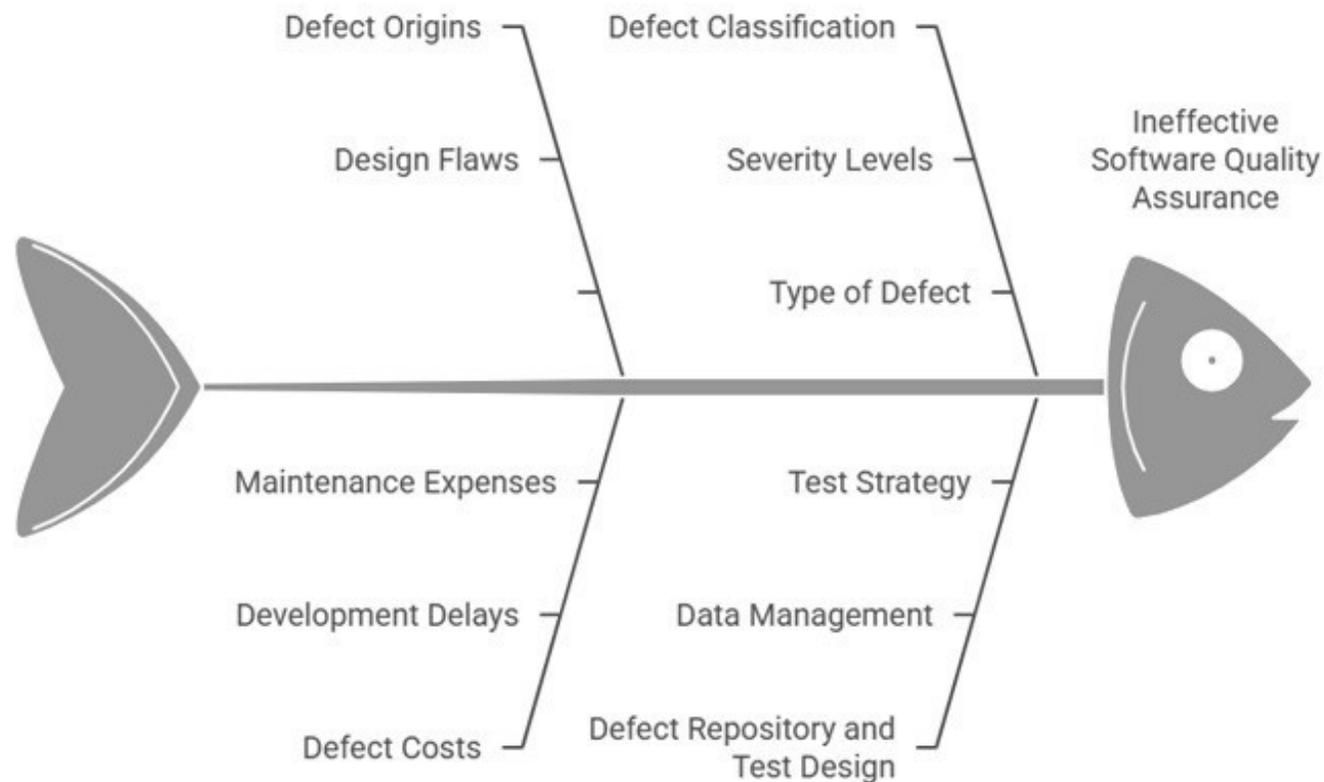
Unit 1 - INTRODUCTION

Topic 6 : Origins of Defects , Cost of defects , Defect Classes , The Defect

Repository and Test Design and Defect Examples

Recall In Enhancing Software Quality Through Defect Management

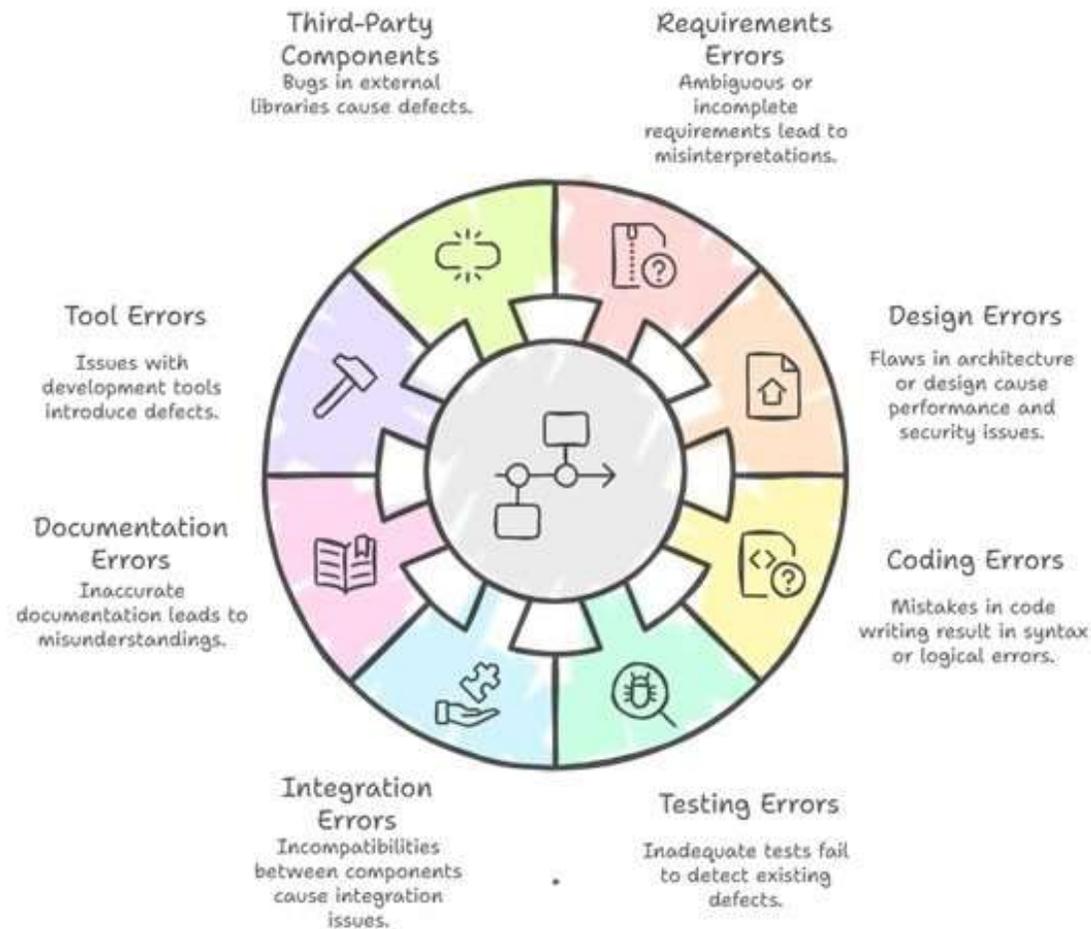
Enhancing Software Quality Through Defect Management



ORIGINS OF DEFECTS , COST OF DEFECTS , DEFECT CLASSES , THE DEFECT REPOSITORY AND TEST DESIGN AND DEFECT EXAMPLES /23ITO201 SOFTWARE TESTING / Mr.K.KARTHIKEYAN/CSE/SNSCT

Empathy in Origins of Software Defects

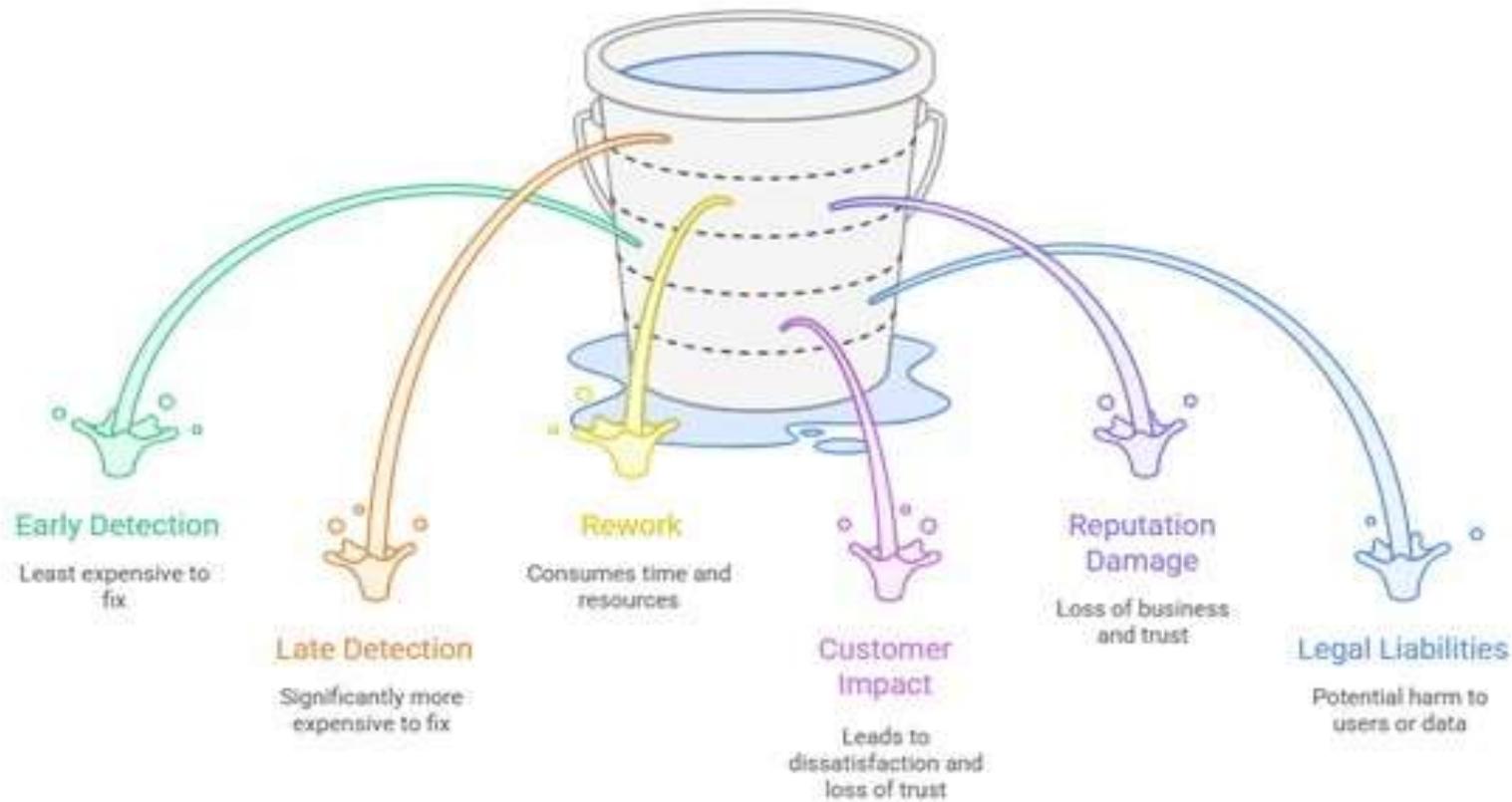
Origins of Software Defects



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The Escalating Cost of Software Defects

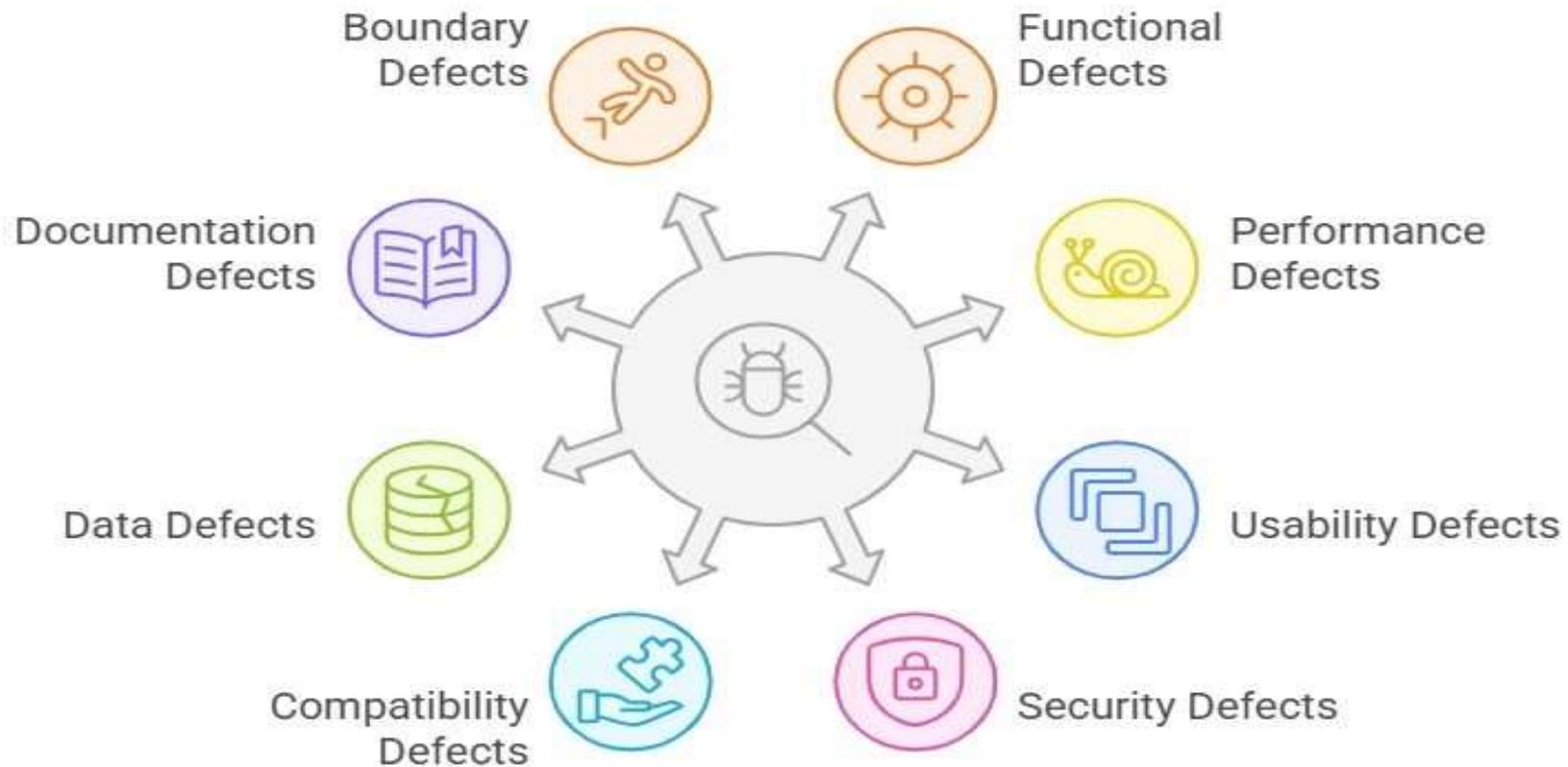
The Escalating Cost of Software Defects



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Defect Classifications

Defect Classifications



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The Defect Repository and Test Design

The Defect Repository and Test Design



Made with  Napkin

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1. ORIGINS OF DEFECTS

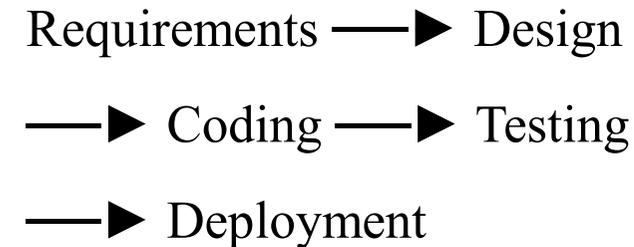
Definition:

Origins of defects refer to the **sources or stages** in the software development life cycle (SDLC) where defects are introduced.

Major Origins

- **Requirements Phase** – unclear, incomplete, or incorrect requirements
- **Design Phase** – poor architecture, wrong algorithms
- **Coding Phase** – logical errors, syntax mistakes
- **Testing Phase** – inadequate test coverage
- **Environment** – hardware, OS, network issues
- **Human Factors** – lack of training, communication gaps

Diagram: Origins of Defects



Activity 1: *Identify the Origin*

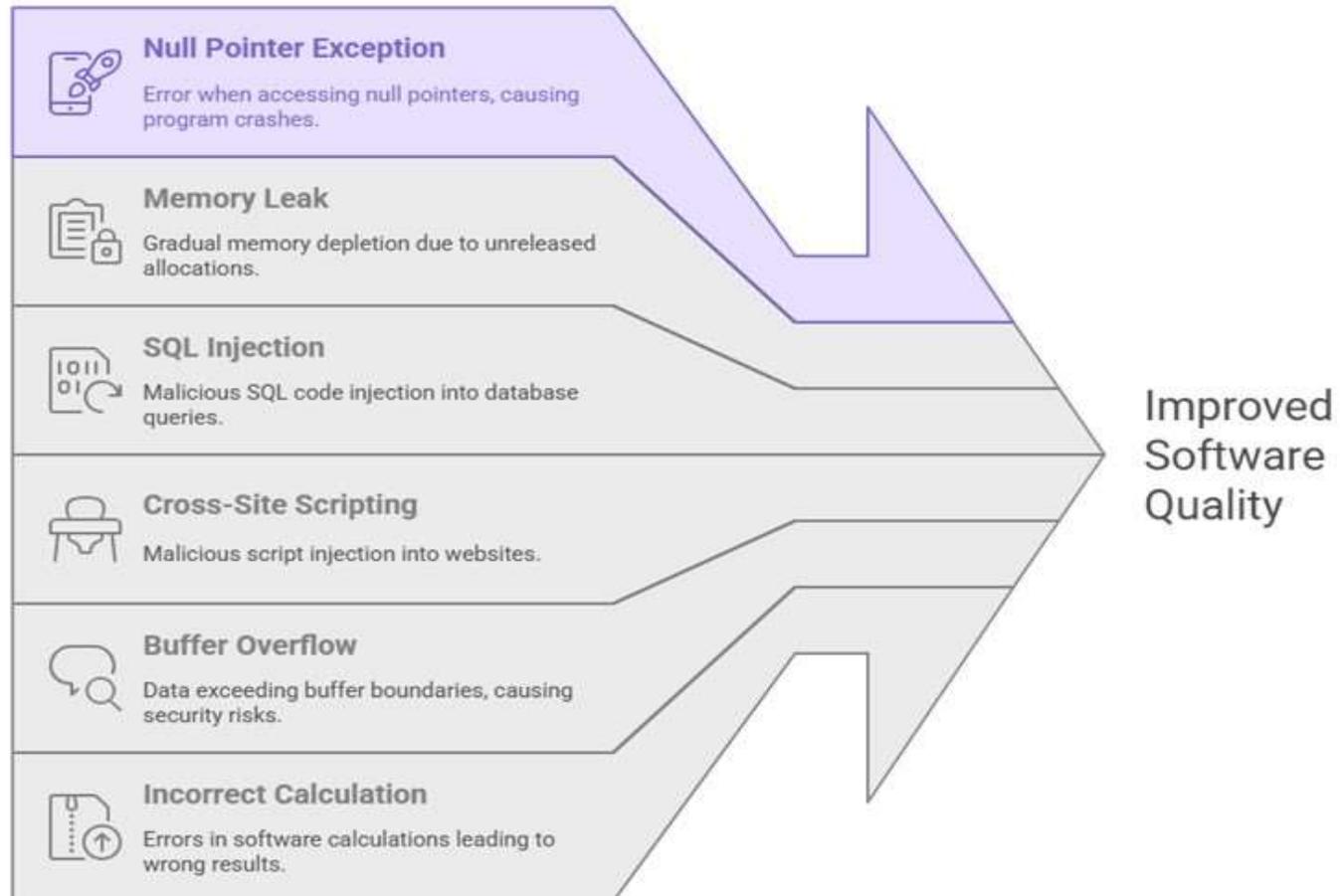
Task:

Given the defect “*Login button does nothing when clicked*”, students identify:

- Requirement defect
- Design defect
- Coding defect

Pathways to Software Excellence

Pathways to Software Excellence



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Defects in Software Testing

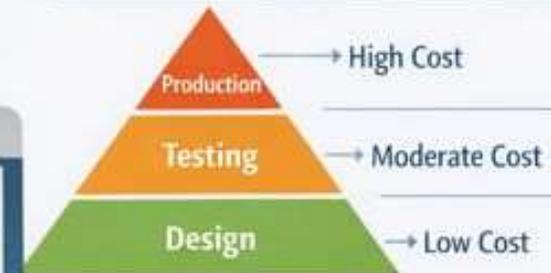
Origins of Defects

- Requirements Issues
- Design Errors
- Coding Mistakes
- Environment Problems

Defect Classes



Cost of Defects



The Defect Repository & Test Design



Defect Examples



Crashes



Broken Links



Validation Errors



Performance Issues

Assessment

MCQs: SOFTWARE DEFECTS

1. Origins of Defects

1. Defects introduced due to ambiguous or incomplete requirements are classified as:

- a) Coding defects
- b) Design defects
- c) Requirement defects
- d) Testing defects

Answer: c

2. Which phase introduces defects due to incorrect algorithms and architecture?

- a) Requirements phase
- b) Design phase
- c) Coding phase
- d) Maintenance phase

Answer: b

TEXT BOOKS	
1.	Srinivasan Desikan and Gopalaswamy Ramesh, —Software Testing – Principles and Practices, Pearson Education, 2006.
REFERENCES	
1.	Ilene Burnstein, —Practical Software Testing, Springer International Edition, 2003
2.	Edward Kit, Software Testing in the Real World – Improving the Process, Pearson Education, 1995
3.	Boris Beizer, Software Testing Techniques – 2nd Edition, Van Nostrand Reinhold, New York, 1990.
4.	Aditya P. Mathur, —Foundations of Software Testing _ Fundamental Algorithms and Techniques, Dorling Kindersley (India) Pvt. Ltd., Pearson Education, 2008.

THANK YOU
