

Introduction to Computer(011301)

Lecture # 31

Topics

- Bugs in Computer
- Debugging in Computer
- Types of Errors
- Errors in Computer
 - Logical Errors
 - Run-Time Errors
 - Syntax Errors

Bugs in Computer

- Bug
- In the **computer** world, a **bug** is an **error** in a software program. It may cause a program to unexpectedly quit or behave in an unintended manner.

- What is a bug in computer terms?
- A software **bug** is an error, flaw or fault in a **computer** program or system that causes it to produce an incorrect or unexpected result, or to behave in unintended ways. ... **Bugs** may have subtle effects or cause the program to crash or freeze the **computer**.

Example

- What is bug example?

The definition of a **bug** is an insect or a defect in something. An **example** of **bug** is a beetle. An **example** of **bug** is something that keeps a computer program from working correctly.

Computer Debugging

- What is computer debugging?
- **Debugging** is the process of finding and resolving defects or problems within a **computer** program that prevent correct operation of **computer** software or a system

The 3 Basic Types of Programming Errors

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(1) Logical errors

Logical errors are the hardest of all error types to detect. They do not cause the program to crash or simply not work at all, they cause it to “misbehave” in some way, rendering wrong output of some kind. One example of a logic error is null reference. Null reference errors are responsible for a huge chunk of application bugs, and they are usually very simple mistakes involving missing or wrong “computer logic.”

(2) Syntax Errors

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Syntax errors in computer programming differ from logical errors in that they don't follow a correct sequence in the computer language.

With compiled languages, you will run into any syntax errors at compile time, and they will have to be corrected before the program can run.

3. Semantic Errors or Run-Time Errors

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- Semantic errors are improper uses of “program statements.” Though different definitions of semantic error exist, we are saying here that logic errors produce wrong data while semantic errors produce nothing meaningful at all.

Thank you