

Chapter 14 Syntax error Logical error Runtime error

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No matter how smart we are, error are our constant companions with practice, we keep getting better at finding & correcting them.

There are three types of errors in Java.

1. Syntax errors
2. Logical errors
3. Runtime errors----- > Also called Exception

Syntax Errors

When compiler finds something wrong with our program, it throw a syntax errors.

Int a=20 ----- > No semicolon, syntax error

d =a+100 ----- >variable not declared, syntax error

Logical errors

A logical error or a bug occurs when a program compiles and error but does not wrong thing.

- Message delivered wrongly.
- Wrong time of chats being displayed.
- Incorrect redirects

Runtime errors

Java may sometimes encounter an errors while the program is running. There are also called exception.

There are encountered due to circumstance like bad input and or resource Constraints Ex. User supplies 'M'+ 4 to a program which adds =numbers.

Syntax errors and logical errors are encountered by the programmer whereas Runtime errors are encountered by the users.

Source Code

```
import java.util.Scanner;

public class Errors_Java {
    public static void main(String[] args) {

        // syntax error
        //      int a=5 // Error no semicolon
        //      d=100; // error produce because d is not declared

        // Logical error demo
        //all prime number 1 t0 10
        //      System.out.println(2);
        //      for(int i=1;i<5;i++){
        //          System.out.println(2*i+1);
        //      }

        // Runtime error
        int input;
        System.out.println("Enter your number except 0:");
        // if you enter 0 than throw exception
        Scanner sc=new Scanner(System.in);
        input=sc.nextInt();
        System.out.println("Integer part of 1000 divided by input is
"+1000/input);

    }
}
```

Thank You