

Day-1 java foundation

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Levels of language:

Until JDK 1.7 ----> JAVA is OOPS

From java JDK 1.8 onwards it's a functional programming language.

Application:-

1. Desktop
2. Web
 - a. Static
 - b. Dynamic

Web Application Architecture:

- **Front-End:** Sends requests (e.g., a login form) to the **Back-End**.
- **Back-End:** Processes the request, fetches data from the **Database** if needed, and sends a response back to the **Front-End**.
- **Database:** Stores and manages data (e.g., user information, products).

In simple terms:

- **Front-End** is what the user sees. -presentation layer
- **Back-End** is where the processing happens.- business layer
- **Database** is where the data is stored.- database layer

ECLIPSE

Open Eclipse:-

create a new java project (uncheck and next n finish): will find JRE &Src

Under Src create a package.

Under package create class

Crtl+space bar- shortcut.

Sysos for System.out.println.

- The **JDK** is used to **develop** the program (writing and compiling the code).
- The **JRE** provides the environment to **run** the program.
- The **JVM** is the engine that **executes** the program, making it platform-independent.

Type Casting:

Implicit Casting:

- a. automatically done by the compiler
- b. No loss of data
- c. Storing smaller values in large datatypes

Explicit Casting:

- a. manually developer has to do the compulsion
- b. Loss of data
- c. Storing large values in small data types

- **Literals:** Fixed values in the code (e.g., 5, "Hello").
- **Keywords:** Reserved words with special meanings (e.g., if, for).
- **Identifiers:** Names for variables, functions, etc., defined by the user (e.g., sum, userName).
- **Data Types:** Specifies the type of data a variable can store (e.g., int, float, string).