

# What is JAVA ?

**Desired Doc**

*... a way of learning*

# WHAT IS JAVA ?

Java is a **programming language** and a **platform**.

Java is a high level, robust, secured and object-oriented programming language.

**Platform:** Any hardware or software environment in which a program runs, is known as a platform. Since Java has its own runtime environment (JRE) and API, it is called platform.

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## Where it is used?

According to Sun, 3 billion devices run java. There are many devices where Java is currently used. Some of them are as follows:

1. Desktop Applications such as acrobat reader, media player, antivirus etc.
  2. Web Applications such as irctc.co.in, javatpoint.com etc.
  3. Enterprise Applications such as banking applications.
  4. Mobile
  5. Embedded System
  6. Smart Card
  7. Robotics
  8. Games etc.
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## Types of Java Applications

There are mainly 4 types of applications that can be created using java programming:

### 1) Standalone Application

It is also known as desktop application or window-based application. An application that we need to install on every machine such as media player, antivirus etc. AWT and Swing are used in java for creating standalone applications.

## 2) Web Application

An application that runs on the server side and creates dynamic page, is called web application. Currently, servlet, jsp, struts, jsf etc. technologies are used for creating web applications in java.

## 3) Enterprise Application

An application that is distributed in nature, such as banking applications etc. It has the advantage of high level security, load balancing and clustering. In java, EJB is used for creating enterprise applications.

## 4) Mobile Application

An application that is created for mobile devices. Currently Android and Java ME are used for creating mobile applications.

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# Java Platforms / Editions

There are 4 platforms or editions of Java:

## 1) Java SE (Java Standard Edition)

It is a java programming platform. It includes Java programming APIs such as java.lang, java.io, java.net, java.util, java.sql, java.math etc. It includes core topics like OOPs, String, Regex, Exception, Inner classes, Multithreading, I/O Stream, Networking, AWT, Swing, Reflection, Collection etc.

## 2) Java EE (Java Enterprise Edition)

It is an enterprise platform which is mainly used to develop web and enterprise applications. It is built on the top of Java SE platform. It includes topics like Servlet, JSP, Web Services, EJB, JPA etc.

## 3) Java ME (Java Micro Edition)

It is a micro platform which is mainly used to develop mobile applications.

## 4) JavaFx

It is used to develop rich internet applications. It uses light-weight user interface API.

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## Prerequisite

To learn Java, you must have the basic knowledge of C/C++ programming language.