# JAVA PROGRAMMING(MCA202)

1. **BASICS OF JAVAs**

**What is JAVA?**

* Java is a platform independent programming language.
* Java is a High-level,class based Object oriented programming(OOP) language.
* It is designed to be platform-independent and follows the “Write Once,Run Anywhere”(WORA) philosophy.

**Where is JAVA used?**

* Java is used in various domains,including web development,mobile application development(Android),enterprise applications,scientific applications,and more.

**Why use JAVA ?**

1. Platform Independence: Java programs can run on any device that supports Java.
2. Object-Oriented: Encourages modular and reusable code through the use of classes and objects.
3. Robust: Java Includes features like strong memory management,exception handling,and garbage collection.
4. Multi-threaded: Java Supports concurrent execution of multi-threads , improving program efficiency.

**History of JAVA ?**

* Java was developed by James Gosling and his team at Sun Microsystems in 1995.
* Java is now owned by Oracle.
* Firstly, it was called ****"Greentalk"****.After “**OAK**”.
* Then in 1995 “**OAK**” was renamed as “**JAVA**”.

**Features of JAVA ?**

1. Simple: Easy to learn and use.
2. Platform Independent: Runs on any device with a Java Virtual Machine(JVM).
3. Object-Oriented: Everything in Java is an Object.
4. Robust: Features like strong memory management,exception handling,and garbage collection.
5. Multi-threaded: Supports concurrent execution of multi-threads.
6. Distributed: Supports networked and distributed computing.
7. Secure:Provides a secure execution environment.
8. Architecture-Neutral: No implementation-dependent aspects.

**Internals of JAVA Program ?**

* A Java program is written in plain text and save with a .java extension.
* The Java compiler(javac) translates the source code into byecode(.class files).
* The Java Virtual Machine(JVM) executes these byte codes on the target platform.