JAVA

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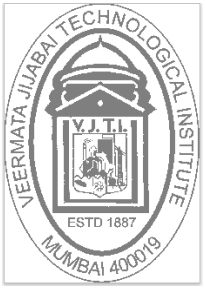
WHAT IS JAVA?



Java is a popular programming language, created in 1995. It is owned by Oracle, and more than 3 billion devices run Java. It is used for:

1) Mobile applications (specially Android apps)

2) Desktop applications

3) Web applications

4) Web servers and application servers

5) Games

6) Database connection

And much, much more! [1].

WHY TO USE JAVA?

- Java works on different platforms (Windows, Mac, Linux, Raspberry Pi, etc.)
- It is one of the most popular programming language in the world
- It is easy to learn and simple to use
- It is open-source and free
- It is secure, fast and powerful
- It has a huge community support (tens of millions of developers)

HOW TO INSTALL JAVA

To check if you have Java installed on a Windows PC, search in the start bar for Java or type the following in Command Prompt (cmd.exe):

```
C:Name>java -version
```

If you do not have Java installed on your computer, you can download it for free from oracle.com.

To install Java on Windows:

1) Go to "System Properties" (Can be found on Control Panel > System and Security > System > Advanced System Settings)

2) Click on the "Environment variables" button under the "Advanced" tab

3) Then, select the "Path" variable in System variables and click on the "Edit" button

4) Click on the "New" button and add the path where Java is installed, followed by . By default, Java is installed in C:Files-11.0.1 (If nothing else was specified when you installed it). In that case, You will have to add a new path with: C:Files-11.0.1

5) Then, click "OK", and save the settings

6)At last, open Command Prompt (cmd.exe) and type java -version to see if Java is running on your machine

[2].

JAVA SYNTAX

JAVA QUICK START

In Java, every application begins with a class name, and that class must match the filename.

Let’s create our first Java file, called MyClass.java, which can be done in any text editor (like Notepad).

The file should contain a "Hello World" message, which is written with the following code:

MyClass.java

```
public class MyClass {
public static void main(String[] args){
System.out.println("Hello World");
}
}
```

JAVA VARIABLES

VARIABLES	USE
string	stores text,String by double quotes
int	stores integers without decimals
float	stores floating point numbers
char	stores single characters e.g 'a','b'
boolean	stores values with two states: true or false

JAVA DATAYPES

DATA TYPE	SIZE
byte	1 byte
short	2 byte
int	4 byte
long	8 byte
float	4 byte
double	8 byte
boolean	1 byte
char	2 byte

JAVA CONDITIONAL STATEMENTS

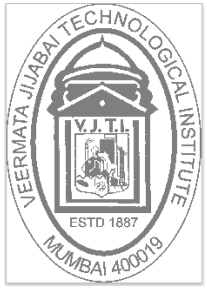
Java supports the usual logical conditions from mathematics

1. Less than: a < b
2. Less than or equal to: a <= b
3. Greater than: a > b
4. Greater than or equal to: a >= b
5. Equal to a == b
6. Not Equal to: a != b

Java has the following conditional statements:

1. Use **if** to specify a block of code to be executed, if a specified condition is true.Use **else** to specify a block of code to be executed, if the same condition is false
2. Use **switch** to specify many alternative blocks of code to be executed

JAVA conditional statements



1) if (condition)
{// block of code to be executed if the condition is true}
else
{ // block of code to be executed if the condition is false}
.
2) switch(expression) {
case x: // code block break;
case y: // code block break;
default: // code block
}

JAVA loops

```
1) while (condition)
{ // code block to be executed
}
.
2) do {
// code block to be executed
}
while (condition);
.
3) for (statement 1; statement 2; statement 3)
{ // code block to be executed
}
```

SAMPLE CODE

An example source code in JAVA

```
  public class MyClass {
  int x = 5;

  public static void main(String[] args) {
    MyClass myObj1 = new MyClass();  // Object 1
    MyClass myObj2 = new MyClass();  // Object 2
    System.out.println(myObj1.x);
    System.out.println(myObj2.x);
  }
}
```

```
save the program as "MyClass.java"
C:\Users\Your Name>javac MyClass.java //to compile
C:\Users\Your Name>java MyClass //to execute.
```

Bibliography

[1] https://www.w3schools.com/java/

[2] https://en.Wikipedia.org/wiki/Java_(programming_language)