

5 TUE

Module 1: Java Fundamentals

How to download and install the latest of Java in your system?

Ans- Step 1:- Open Oracle.com for opening ~~official~~ official oracle java download page.

Step 2:- Scroll to the Java version which we wanna download on our device and click on JDK Download options

6 WED Step 3:- Scroll down to page and click download option suitable for your PC with x64.

Step 4:- Then it will navigate to Oracle login page we need to login and after it it will start downloading

Step 5:- Do next and next to download Java development kit.

Step 6:- It will ask for the installation of JRE. Press continue then it's completed.

Q2) Explain the process of setting up the Java environment variables.

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→ ~~At~~ Step 1:- After the installation of JDK. Go to Control Panel → System Security → System. Under the Advanced System, click on Environment Variables.

Step 2:- Now, you have to alter the "Path" variable under System variables so select Path and click on Edit.

Step 3:- Click on New. Add path C:\Program Files\Java\jdk\bin to the Path.

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Step 4:- Click OK save the settings and done installation.

Q3) Walk me through the steps of download and Install Eclipse IDE?

→ Step 1: Open your browser and type

Step 2:- Click on download button on top right side

Step 3:- Click on download 64 bit button

9 SAT and then to download
step 4:- Install Eclipse in PC click
on eclipse -inst -win64.exe in download
& extract it.

Step 5:- Click on Run the Eclipse IDE
for Java developers then click Install

Step 6:- Then Launch it in device.

Q4 Key features and Components of Eclipse
IDE?

→ The Components in Eclipse are

- o Eclipse Workbench
- o Eclipse Workspace
- o Eclipse Runtime

Eclipse Workbench consist of several components
such as platform kernel, the workspace.
It has collection of pages

Eclipse Workspace is ~~where~~ a location on your
machine where all the work you do through
Eclipse will be stored.

Eclipse Runtime:- The execution of the code
is faster here with the help of JRE.

Q6) How do you compile and run a Java program in command line?

→ In command prompt go to that directory where you saved the program `Java Program.java`

1) Type `javac MyFirstJavaProgram.java JavaProgram.java` and press enter. If no error

2) Type `java JavaProgram` to run the program

Q7) Discuss the differences between the `print` and `println` methods used in the output.

→ `Println()`:- The `Println()` method prints the string and moves the cursor to a new line.

1) The method can work without arguments.

`Print()`:- The `Print()` method instead prints just the string but doesn't move to next line.
2) The method only works with arguments or else syntax error.

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Q. Define a variable in Java and demonstrate different type you can use.

→ The A variable is the name of a reserved area allocated to memory. The name of the memory location. The value of variables can be changed.

Example variable

int a = 10; ← Data

data type 'a' = 10
14 THU

The different types are

- 1) char b = '2'; - In this single character stored
- 2) float num = 7.23; - Store small fractional number
- 3) double num = 7.232332; - Store large fractional number
- 4) bool a = true; - Store true false
- 5) long int a = 234567890; - Store large whole numbers
- 6) String name = "Ayush"; - Store a string.

Notes

Q9) Explain the concept of Java operators with suitable examples. 15 FRI

→ Java operators are symbols that are used to perform operations ~~and~~ on variables and manipulate the value of operands. Example $5 + 1 = 6$; here 5 and 1 are operands, and symbol + (plus) is called the operator.

There are many different type of operator
(++) - Increment operator which increase value by one
(--) - Decrement operator ~~decreases~~ decreases by one

(&&) and operator it returns true if both the operands are true. 16 SAT

(||) or operator it returns true if only one operand are true.

Q10) How would you use The break statement within a loop? Provide with an example.

```
→ int i = 0;
   while (i < 10) {
       System.out.println(i);
       i++;
       if (i == 5)
           break;
   }
```

Notes

```
{
}
{
```


21 THU here when i is equal to 5 the loop will break and return values only till 4 and not further.

Q17) Explain the difference between equals(), equalsIgnoreCase(), and compareTo() method in string class

→ equals() in Java is to check for equality between two strings and returns boolean.

compareTo() :- Returns an integer. It checks which of the two objects is "less than", "equal to" or

"greater than" the other. • It compares strings on the basis of Unicode value of each character in the string.

equalsIgnoreCase() in Java is to check for equality between two strings ignoring the case without any and returns true without checking the case.