

Day 1 : 21/10/2023

Backend technology -> Java and connecting database using JDBC.

Java

Core Java

J2SE

J2EE

J2ME

JavaSE

JavaEE

JavaME

JSE

JEE

JME

Java Standard Edition

Java Enterprise Edition

Java Micro Edition

Desktop application

Servlet and JSP : web application

Console base application

We will teach how to create

Basic Java Programming

Rest API

OOPs Concept

those rest api we will

Object,

call in angular

Class,

maven build tools

Exception handling

Collection Framework with Data structure

JDBC topic to connect MySQL

Java8(Lambda Expression and Stream API)

and 11 and 15

Regex

Java 22

Intro to Mongo DB

No SQL Database

Using Java we can connect to database using

1. JDBC
2. ORM -> Hibernate and JPA.
3. Using Core Java, Servlet /JSP we can use JDBC or Hibernate or JPA.
4. Spring Framework we can use JDBC or Hibernate or JPA.
5. In Spring boot JDBC or JPA or Spring Data.

Phase 3 or Course 3

Spring framework and Spring boot

Junit 5 testing tool

Course 4 : Testing and deployment

Testing

TestNG, Selenium,

Docker, CI and CD using Jenkin, Overview of AWS

In AWS we will teach you how to deploy application in EC2 instance using Docker with CI and CD tool ie Jenkin

Frontend -> angular

Backend -> spring boot

Database -> MySQL

Day 2 : 22/10/2023

Java : Java is pure object oriented and platform independent programming language.

Java develop in nov 1995. The initial name of java is Oak.

Version of Java

Java 1.0,1.1,1.2	7, 8,9,11,15	22
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Java is an open source.

From java 11 onward java is not open source.

Java was belong to sun micro system

Now it is part of oracle.

Oops

object : object is any real world entity. Example

property or state or variable → have → variable, fields etc

name, age, weight, height, colour etc.

int, float, char, double, string etc.

Person

Behaviour or function or methods → do/does → function or methods.

Teaching(), sleeping(), talking(), typing(), etc

Bank

Animal

Car

Customer

class : blue print of object or template of object or user defined data type which help to describe the object.

Syntax of class

```
class ClassName {  
    fields or variable declaration  
    method or function declaration  
}  
  
class Demo {  
    main method : pre defined methods.  
}
```

Class name must follow pascal naming

1. If class contains one word first letter upper case.
2. If class contains more than one word each word first letter upper case.

Syntax to write method in java

```
returnType methodName(parameterList) {  
    Method body;  
}
```

```
void display() {
```

```
}
```

Method name is display no passing parameter and no return type.

```
void add(int x, int y) {
```

```
}
```

Method name is add. We need to pass two parameter of type int but no return type.

```
String sayHello(String name) {
```

```
    return "Welcome user "+name;
```

```
}
```

Method name is sayHello. Need to pass one parameter of type string and return string value

In java all method must part of class.

```
class Test {
```

```
    public static void main(String args[]) {
```

```
        System.out.println("Welcome to Java");
```

```
    }
```

```
}
```

Method name and variable name must be follow camel naming rules.

1. If variable name or method name one word. Then it must be in lower case. Like main(), sleeping(), display(), read() etc and id, name, salary etc.
2. If variable name or method name more than one word then from second word first letter upper case like displayInfo(), calSalary(), empId, etc.

Data types : Data type is a type of data which tells what data type data it can hold.

a=10; python

var b=20; js

let c:number =30; ts

datatype variableName;

datatype variableName=value;

In java data types are divided into two types.

1. Primitive data types :it is use to store only value

8 types

a. byte 1 byte -128 to 127

b. short 2 byte

c. int 4 byte

d. long 8 byte

without decimal point

e. float 4 byte

f. double 8 byte

with decimal point

g. char 2 byte in single character

h. boolean 1 bit true or false value

Operator :

1. arithmetic operator : +, -, *, /, %
2. logical operator : &&, ||, !
3. conditional operator : >, <, >=, <=, ==, !=
4. assignment operator =
5. increment and decrement operator : ++, --

if statement

- a. simple if
- b. if else
- c. if else if
- d. switch statement

syntax of switch statement

```
int label =1;
```

```
switch(variableName) { variable type must be int, char or string in java.
```

```
case 1:block1
```

```
    break;
```

```
case 2:block12
```

```
    break;
```

```
case 3:block3
```

```
    break;
```

```
case 4:block4
```

```
    break;
```

```
default : default block ;
```

```
    break;
```

```
}
```

Looping : looping is use to execute the task or statement again and again repeatedly

Till the condition become false.

Initialization

Condition

Task

Increment and decrement.

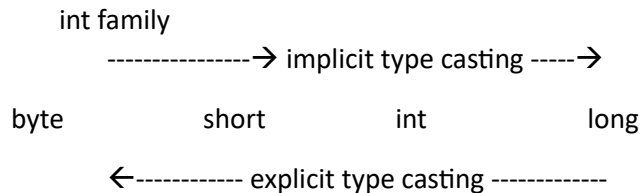
- a. While loop : entry loop
- b. Do while loop : exit loop
- c. For loop

Type casting :

Converting from one data type to another data type is known as type casting.

Two type of type casting.

- a. Implicit type casting
- b. Explicit type casting



int	to	float	implicit
float	to	int	explicit

in java by default every decimal number double consider.

2. Non primitive or reference data types. : it is use to store value as well as reference of another data types.

4 types of non primitive

1. array :array is user defined or reference data type which help to store same type of values.

In java array is known as fixed in memory size.

datatype arrayname[]; array declaration

int num[];

int a;

int num1[]={10,20,30,40,50}; array declaration with initialization

array memory creation syntax

datatype arrayname[]=new datatype[size];

int num2[]=new int[10];

num2 can hold 10 value. Start from 0 to 9 position.

Taking the value through keyboard in java

Using Scanner class.

Scanner is a pre-defined class part of util package.

Package is a collection of classes as well as interfaces.

We need to create Scanner class object.

Syntax to create Scanner class object

```
Scanner obj = new Scanner(System.in);
```

While creating scanner class object we will get error. Because Scanner class part of util Package. We need to import it.

2. class

Scanner : pre defined class which help to scan the value through keyboard.

String : in Java String is a pre defined class. which help to store more than one Character in double quote.

String is pre defined class part of lang package.

By default java imported lang package.

3. interface

4. enum

in Ts or JS

```
class Customer {  
}
```

```
var obj1 = new Customer();
```

```
let obj2=new Customer();
```

```
Scanner obj1 = new Scanner(System.in);
```

```
obj.nextInt(); int value
```


obj.next() string value

obj.nextFloat() float value

maven tools