JAVA OVERVIEW

What is java : Java is a programming language and a platform independent Language.

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

Plat form independent : Any hardware or software environment which a program runs.

Where it is used:

* Desktop application (ex:- anti-virus, Media player )
* Web applications (Web sites like irctc.com,javatpoint.com …)
* Mobile applications ( mobile apps)
* Enterprise applications (like banking)
* Games.

Types of java :-

There are mainly three types

Java

JSE JEE JME

JSE:- java Standard edition ( desktop applications to create).

JEE:- java enterprise edition (web applications).

JME:- java micro edition & java mobile edition (mobile application to create).

Features of java:

There are many features of java

* Simple
* Object oriented
* Platform independent
* Secure
* Robust
* Portable
* Interpreted
* High performance
* Multithreaded
* Distributed
* Dynamic

Simple:- java is designed easy to learn. Java understand the basic concept of OOPS. It is easy.

Object oriented:- purely depends on object . follows the oops principle.

Platform independent:- it can run on any platform(any hardware or software).

Secure:- java doesn’t allow malicious software form the internet, it done to objects.

Robust:- how java is robust, consider two things in java

1. Memory management
2. Exception handling

Robust means strong.

Portable :- we carry java code from one system to any other system.

Interpreted :-line by line execution.

High performance:- with the use of the Just in time compilers. java enables high performance.

Multi-threaded :- we can execute multiple process in java is set to be multi threaded.

Distributed:- java designed for the distributed environment of the internet because it handles tcp/ip protocols.

Dynamic:-the input are substantial information given by user dynamically.

OOPS(object oriented programing system):-

Platform independent programing language. Methodology to design a program using classes & objects.

It providing some concepts

1. Inheritance :- properties of one class to other .
2. Polymorphism:- one task many implementations.
3. Encapsulation :-binding the data.
4. Abstraction :- hiding unwanted data.

Compiler :- compiler is software converts high level to machine code.

Interpreter :- in java, compiler convert high level to middle level know as byte code

Byte code converting into machine code is done by interpreter.

Variable :- name of the memory location.

Variables are three tyes

1. Local variable (it declare inside the method is local variable )
2. Instance variable (it declare inside the class out side the method)
3. Static variable (static is same as instance variable it declared as static)

Data types:

Different values to be stored in the variable.

Data types are two types

* Primitive data type
* Non primitive data type

Primitive data type are four characteristics

1. Integer (byte, int, short, long)
2. Decimal (float, double)
3. Boolean (Boolean)
4. Character (char)

Non primitive data type are two types

1. Strings
2. Arrays

Class :- collection of variables & methods and objects is called class

it is a blue print.

Object :- instance of a class & a real entity which explains behavior is called object.

Method over loading :- method name is same parameters are different is called method over loading

Method over reading :- method name is same but it different classes is known as method over reading

Methods are three type

1. Static method (public static void add())
2. Instance method ( public void add())
3. Abstract method (public void add();)

Scanner :- scanner is a class in unil package.

Package :- collection of classes + interfaces

STRINGS

String:- string is a reference data type.

String is basically an object. That represents Sequence of char values. An array of characters works same as java string.

Collection of homogenies elements is called string.

String is a immutable.

Immutable means no changeable.

Ex:- char[]ch= {‘a’,’b’,’c’,’d’};

String s=new string(ch);

Object creating:- first string class name object reference =new constructer.

Ex:-A b=new A();

Immutable string example:

String s=”suman”;

S=”suman varma”;

s.o.p(s);

here out is suman only this is immutable

immutable string change other string to create an object to change the string.

Ex:-

String s=new string(“suman”);

s=s.concat(“suman varma”);

s.o.p(s);

here the out put is suman varma .

Mutable strings are two types

1. String Buffer
2. String Builder

String Buffer:-

String buffer is the mutable string. Thread safe the string buffer.

Ex:-

String Buffer str= new StringBuffer (“suman”);

Str.append(“harsha”);

s.o.p(str);

out put : suman harsha

string builder:-

String builder is the mutable string. Not thread safe the string builder.

Ex:-

String Builder=new String Builder(“suman”);

str .append(“varma”);

output:- suman varma

string to primitive:- how to change a string which is having an integer number to integer datatype

we use parseInt() methods.

Ex:- string str=”455”;

String str2=”123”;

Int i=integer.parseInt(str);

Int j=integer.parseInt(str2);

s.o.p(i+j);

output:-578

examples:- float f=float.parseF loat(str);

same as to float(),double(),long(),byte().

Primitive to string:-

To convert in primitive to string using toString();

I=10;

String str=i.tostring();

String str=string.valueof(i);

Methods of string:-

There is number of method available here.

* charAt()
* length()
* substring()
* replace()
* replaceAll()
* toUppercase()
* toLowercase()
* trim()
* split()
* toCharArray()
* equals()

these are the methods in strings