ASSIGNMENT-I ①

1) List & Explain Java buzz words. which factors are making Java famous language?.

A) **simple**: Java is really easy for any developer to learn with little programming experience because it inherits most of the features from programming languaques like c++, c...

secure: when Java programs are executed theydon't instruct commands to the machine directly. Instead Java virtual machine (JVM) reads the program & carrent it into the machine instructors this way any program tries to get illegal access to the system will not be allowed by the Jvm.

Portable: Java programs are portable because of its ability to run the program on any platform & no dependency on the under lying operating system.

object oriented programming: the object oriented model in Java is simple & easy to Extend and also the primitive types such as Integers are retained for high perfomance.

Interpreter: This complied code of Job is not machine Interpreter but Instructions rather 9ts a intermediate code called byte code. Jvm interpreter the Byte code into machines Instructions during runtime.

Java is used to develop anroid applications using API, build web applications, software tools and scenitific tools. Java is used in many fields making it a famous language.

2) what are the benifits of inheritance? Explain various forms of inheritence will suitable code segments?

A) The process by which one class acquires the properties and functionalities of another class is called Inheritence.

single Inheritence: It refers to a super & sub class relationship where a class extendens the another class.

Ex: class A {
        int i;
        string a;
    }
    class B extends A {
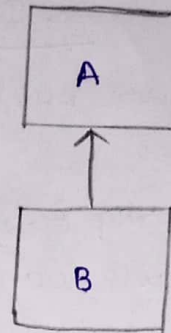   public void set values()
            {
                i=5;
            }
    }

A

B

Multiple Inheritance: It refers to super & sub class relati-onship where a class extends the sub class.

Ex: class {
        public void method() {
            System.out.println("x");
        }
    class y extends x {
        public void method y {
                System.out.println("y");
        }
    class z extends y {
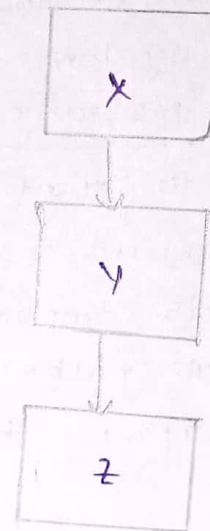   public void method z {
            System.out.println("z");
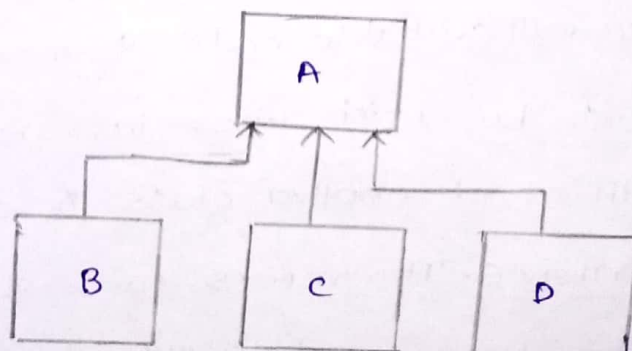   }
    }

x

y

z

Hierarichal Inheritence: It refers to a super & sub class relationship where more than one classes extend the same class.

Ex: class A {
        - - - - - -
    }
    class B extends A
    {
        - - - - -
    }

A

B   C   D

```
class c extends A
{
    - - - - - .
    - - - - .
}
```

③

Hybrid Inheritence: combination of more than one type of Inheritan--ce in a single program.

Advantages of Inheritence :

1) Inheritence promotes reuasability. when a class inherits another Class. it can access all the functionality of Inherited class.
2) Reausability enhances reliability
3) It helps reduce code reduandancy & supports code extensibility

③ Define a class named movie Magic with the following description:
Instance variables| data members:

int year - to store the year of release of a movie

string title - to store the title of the movie.

Float rating - to store the popularity rating of the movie.
(minimum rating =0.0 & maximum rating =5.0)
member methods:

(i) movie Magic () Default constructor to initialize numeric data members to o and string data member to " ".

(ii) void accept () To input & store year, title & rating

(iii) void display () To display the title of a movie & a message based on the rating as per the table below.

Rating	message to be displayed
0.0 to 2.0	Flop
2.1 to 3.4	Semi-hit
3.5 to 4.5	Hit
4.6 to 5.0	Super Hit

write a main method to create an object of the class & call the above member methods.

A) **program: Main**

```
import java util. scanner;
class movieMagic
{
```

```
int year;
String title;
float rating;
movie magic()
{
    year = 0;
    title = " ";
    rating = 0;
}
void accept()
{
    Scanner sc = new scanner(system.in);
    System.out.println("Enter title: ");
    title = sc.nextline();
    System.out.println("Enter release year:");
    year = sc.next line();
    System.out.println("Enter rating,");
    rating = sc.nextline();
}
void display()
{
    system.out.println("Title:"+title);
    if(rating >=0.0 && rating <=2.0)
    {
        System.out.println("flop");
    }
    else if(rating >=2.1 && rating <=3.4)
    {
        System.out.println("semi hit");
    }
    else if(rating>=3.5 && rating <=4.5)
    {
        system.out.println("Hit");
    }
    else if(rating >=4.6 && rating <=5.0)
    {
        system.out.println("superhit");
    }
```

```
    else {
            System.out.println("Rating should be blw 0.0 and 5.0");
        }
    }

    Public static void main (string args[])
    {

        movie magic ob = new movie magic();
        ob. accept()
        ob. display();
    }
}
```

4) Write a class to overload a function num_calc() as follows:

i) void num_calc (int num, char ch) with one Integer argument & one character argument. If it computes the square of Integer argument if choosed 'ch' is 's' other wise find its cube.

ii) void num_calc (int a, int b, char ch) with 2 Integer arguments & one character argument. It computes the product of Integer arguments if ch is 'p' else adds the Integers.

iii) void num_calc (string S₁, string S₂) with two arguments, which prints whether the strings are Equal (8) not.

A) Program: overloading function num_calc

```
    import java.io.;
    import java.util;
    Class calc
    {
        void num_calc (int num, class ch)
        {
            int a=0;
            If (ch == 's')
                Q = num * num;
            else
                a = num * num * num;
            System.out.println("a* =" +a);
        }
        void num - calc (int a, int b, class ch)
        {
            Int q=0;
```

```
        if (ch == "p")
          q = a R b;
        else
            q = a + b;
        System.out.println("q =" +q);
    }
    void num-calc(string s1, string s2)
    {
        if (s1.equals(s2))
            System.out.println(" Both strings are Equal");

        else
            system.out.println(" Both string (or) not Equal");
    }
    public static void main (string args[])
    {

            Calc ob = new Calc();
            ob.num-calc (10, 's');
            ob.num-calc (20, 30,'q');
        ob.num-calc ("Java", "program");
    }
}
```

output: a = 100; q = 50.

Both strings are not Equal.

Resources:

1) https://j4school.wordpress.com/java-tutorials/

2) https://beginners.com/2013/03/inheritance-in-java/

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