VASIREDDY VENKATADRI INSTITUTE OF TECHNOLOGY:: NAMBUR

MID TERM ASSIGNMENT
ACADEMIC YEAR:20 TO 20

Hall Ticket No. : 19bq1a05i4

Name of the Student : Pulivarthi Satya

Course : Btech

Branch : ECE/CSE/EEE/IT Cse

Subject : Java programming

ASSIGNMENT / MARKS DETAILS

To be filled by the Student			To be filled by the Subject Teacher		
Submission Date	*Assignment*	*Signature of the Student*	*Max Marks*	*Marks Obtained*	*Signature of Subject Teacher*
			5		

INSTRUCTIONS TO THE STUDENTS

1. The assignment should be submitted to the subject teacher on or before the given schedule.
2. Answer should be written on both sides of the paper.

INSTRUCTIONS TO THE SUBJECT TEACHER

1. The Subject teacher has to value with red ball point pen only.
2. The Subject teacher should award the marks on the left hand side of the margin and at the end of the each answer.
3. Do not correct the marks by overwriting or by scratching and writing.
4. The Subject teacher has to post marks in the space provided.

VASIREDDY VENKATADRI INSTITUTE OF TECHNOLOGY, NAMBUR
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Vision of the Department
To facilitate quality education by focusing on assimilation, generation and dissemination of knowledge in the area of Computer Science & Engineering to transform students into socially responsible engineers.

Mission of the Department
○ Equip our graduates with the knowledge by ***student centric teaching-learning process*** and expertise to contribute significantly to the software industry and to continue to grow professionally. ○ To train ***socially responsible, disciplined engineers*** who work with good leadership skills and can contribute for nation building. ○ To make our graduates ***aware of cutting edge technologies*** and make them industry-ready engineers. ○ To shape the department into a ***centre of academic and research excellence***.

Program Educational Objectives	
PEO-1	To provide the graduates with solid foundation in Computer Science and Engineering along with the **fundamentals of Mathematics and Sciences** with a view to impart in them high quality technical skills like modelling, analyzing, designing, programming and implementation with global competence.
PEO-2	To prepare and motivate graduates with **recent technological developments related to core subjects** like programming, databases, design of compilers and Network Security aspects and future technologies so as to contribute effectively for Research & Development by participating in professional activities like publishing and seeking copy rights.
PEO-3	To train graduates to choose an appropriate **career in employment, higher education or entrepreneurship** by empowering them to excel in competitive examinations, by preparing them for lifelong learning and by inculcating in them ethical leadership skills.
PEO-4	To train the graduates to have basic **interpersonal skills and sense of social responsibility** that paves them a way to become good team members and leaders.

19BQHA05I4 JAVA ASSIGNMENT-1 SET-5

1) List and explain Javabuzzwords which factors making Java famous language.

A) The list of java buzzwords

→ Simple
→ Secure
→ Portable
→ object-oriented
→ Robust
→ Architecture-neutral (or) platform Independent
→ Multi-threaded
→ Interpreted
→ High performance
→ Dynamic
→ Distributed

Simple: Java Programming language is very simple and easy to learn, understand and code. In java many complicated features like pointers, operators, structures,....etc have been removed. One of the most useful features is the garbage collector it makes java more simple.

Secure: Java is said to be more secure because it doesnot have pointers concept, it provides a feature "applet" which can be embedded into a web application.

It doesnot allow access to other parts of computer.

Portable :- Portability enables java programs to run on any computer. for example, an applet developed using java runs on a wide variety of CPUs, operating systems, and browsers connected to the internet.

Object - Oriented :- Java is said to be pure object-oriented programming language. In java everything is an object. It supports all the features of the OOP paradigm. The primitive datatypes are also implemented as objects using wrapper classes in java, but still allows to achive high performance.

Robust :- Java is more robust because the java code can be executed on variety of environments. It has strong memory management mechanism (garbage collector).

Interpreted :- JVM interpreter the Byte code into machines instructions during runtime. The intermediate code is called byte code.

The list of key features is known as Java Buzzwords.

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

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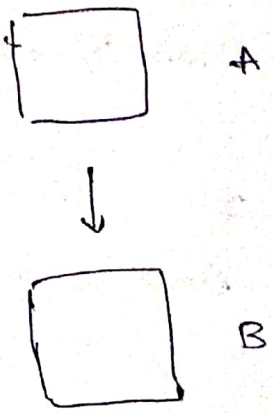
2) What are the benefits of inheritance? Explain various forms of inheritance with suitable code segments? 2

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

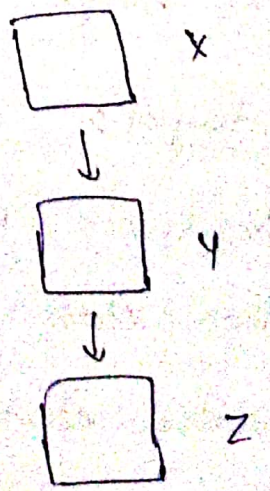
Single Inheritance:- It refers to a super & sub class relationship where a class extends the another class.

Ex:
```
class A {
    int a;
}
class B extends A {
    Public void setValue()
    {
      a=5;
    }
}
```



Multilevel Inheritance: It refers to super & subclass relationship where a class extends the sub class.

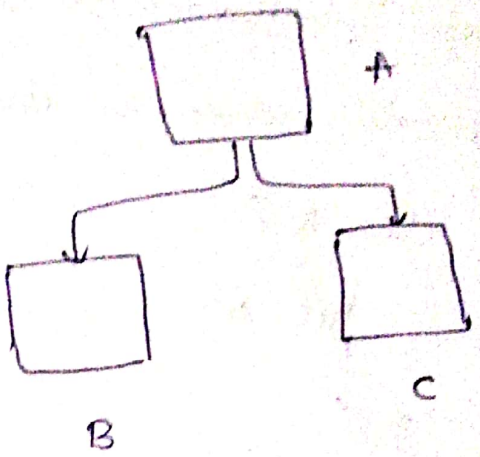
Ex:
```
Public class X {
    public void method(){
        - - -
    }
}
class Y extends X {
        - - -
}
class Z extends Y {
        - - -
}
```



Multiple Inheritance: It refers to super & sub class relationship where a class extends the sub class

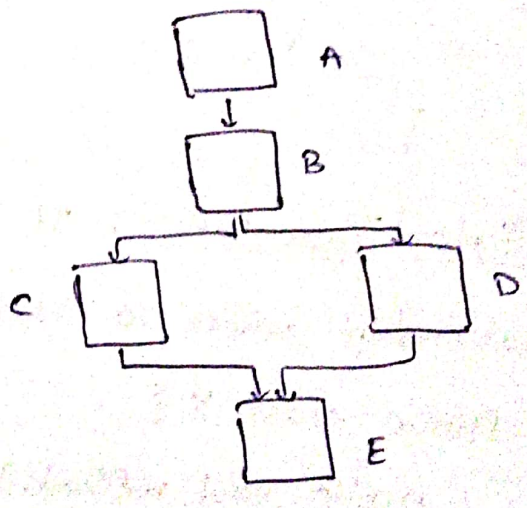
Hierarchical Inheritance: It refers to super & sub class relationship where more than one classes extend the same class.

eg: class A {
    . . . .
}
class B extends A {
    . . . .
}
class C extends A {
    . . . .
}



Hybrid Inheritance:

Combination of more than one type of inheritance in a single program.



Advantages:

→ Inheritance promotes reusability. When a class inherits another class it can access all the functionality of inherited classes

→ It helps reduce code redundancy & supports extensibility.

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→ Reusability enhances readability

5A) Program:

```
import java.util.Scanner;
class movieMagic{
    int year;
    String title;
    float rating;
    public movieMagic(){
        year = 0;
        title = " ";
        rating = 0.0;
    }
    public void accept(){
        Scanner sc = new Scanner(System.in);
        System.out.println(" title ");
        title = sc.nextLine();
        System.out.println(" year ");
        year = sc.nextInt();
        System.out.println(" rating ");
        rating = sc.nextFloat();
    }
    public void display(){
        System.out.println(" Title is " + title);
```

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```
if (rating >= 0.0 && rating <= 2.0)
{   System.out.println (" flop");

if (rating > 2.0 && rating < 3.5)
        System.out.println ("semi hit");

if (rating >= 3.5 && rating <= 4.5)
        System.out.Println ("Hit");

if (rating > 4.5 && rating <= 5.0)
        System.out.Println ("Superhit");

if (rating < 0.0 && rating > 5.0)
        System.out.Println ("give proper rating");

}
Public static void main (String args[])
{
    movieMagic obj = new movieMagic();
    obj.accept();
    obj.display();
}
}
```

4) Write a class to overload a function num-case() as follows:

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4) Program

```
Public class numCal {

    Public void num_calc(int num, char ch) {
        int n=0;
        if (ch == 's')

            n=num * num;

        else
            n=num* num* num;

    }

    public void num_calc(int a, int b, char ch){
        int n=0
        if (ch == 'p')

            n=a * b;

        else
            n = a+b;

    }
    public void num_calc( String s1, String s2){

        if (s1.equals(s2))

                System.out.Print(" Both strings are equal");

        else
                System.out.Print(" Strings are not equal");

    }
    public static void main( String args[])
    {
        numCal obj = new numCal();
```

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```
Scanner sc = new Scanner(System.in);
int num = sc.nextInt();
char ch1 = sc.next().charAt(0);
int a = sc.nextInt();
int b = sc.nextInt();
char ch2 = sc.next().charAt(0);
String s1 = sc.nextLine();
String s2 = sc.nextLine();
obj.num_calc(num, ch1)
obj.num_calc(a, b, ch2)
obj.num_calc(s1, s2);
}
}
```

Resources :-

www.w3professors.com/java-tutorials/java-introduction