

WEB TECHNOLOGY(LAB-8)

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Q1. 1. Illustrate the usage of abstract class with following Java classes – i>An abstract class „student“ with data member roll no, reg no and a abstract method course() ii>A subclass "kiitian" with course() method implementation

Code:-

```
import java.util.Scanner;

abstract class student {
    int rollno, rgno;

    abstract void course();
}

class kiitian extends student {
    Scanner sc = new Scanner(System.in);

    void course() {
        System.out.println("INPUT THE DATA FOR STUDENT");
        System.out.println("ENTER THE REGISTRATION NUMBER OF STUDENT");
        rgno = sc.nextInt();
        System.out.println("ENTER THE ROLL NUMBER OF STUDENT");
        rollno = sc.nextInt();
    }

    void display() {
        System.out.println("THE ROLL NO AND REGISTRATION NUMBER OF THE STUDENT IS\n" + rgno + "\n" + rollno);
    }
}

public class q1 {
    public static void main(String[] args) {
        kiitian Kiit = new kiitian();
        Kiit.course();
        Kiit.display();
    }
}
```

Output:-

INPUT THE DATA FOR STUDENT

ENTER THE REGISTRATION NUMBER OF STUDENT

13245677

ENTER THE ROLL NUMBER OF STUDENT

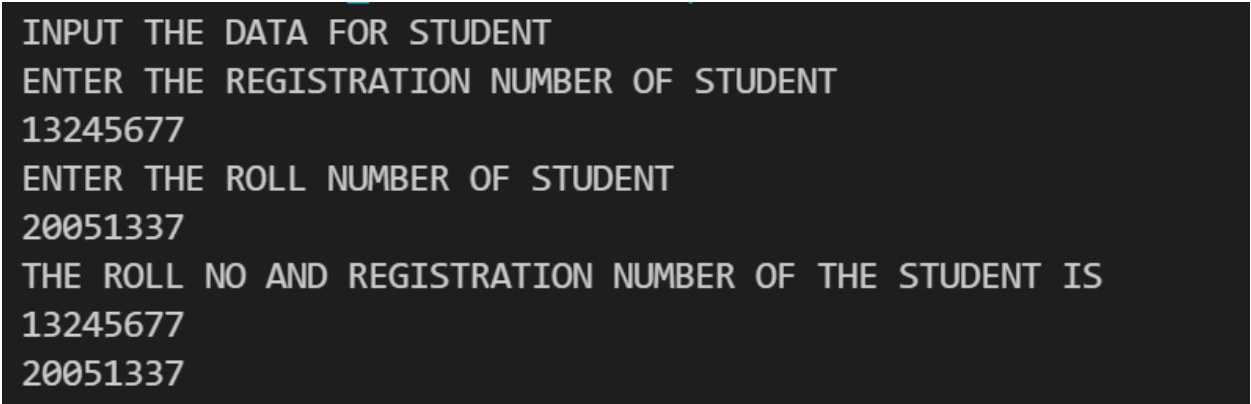
20051337

THE ROLL NO AND REGISTRATION NUMBER OF THE STUDENT IS

13245677

20051337

Screenshot:-

A screenshot of a Java program's output. The text is displayed in a monospaced font on a dark background. It shows the program prompting for student data, receiving input for registration number (13245677) and roll number (20051337), and then displaying the entered values.

```
INPUT THE DATA FOR STUDENT
ENTER THE REGISTRATION NUMBER OF STUDENT
13245677
ENTER THE ROLL NUMBER OF STUDENT
20051337
THE ROLL NO AND REGISTRATION NUMBER OF THE STUDENT IS
13245677
20051337
```

2. Define an interface Motor with a data member –capacity and two methods such as run() and consume(). Define a Java class „Washing machine“ which implements this interface and write the code to check the value of the interface data member thru an object of the class.

Code:-

```
interface motor {
    int capacity = 200;
```

```

    void run();

    void consume();
}

class q2 implements motor {
    public void run() {
        System.out.println("It's running Sucessfully");
    }

    public void consume() {
        System.out.println("It also consume low current");
    }

    public static void main(String args[]) {
        motor obj = new q2();
        obj.run();
        obj.consume();
    }
}

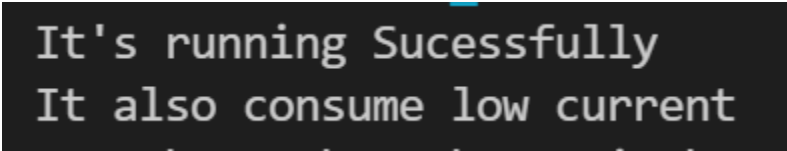
```

Output:-

It's running Sucessfully

It also consume low current

Screenshot:-



```

It's running Sucessfully
It also consume low current

```

3. Define an interface with three methods – earnings(), deductions() and bonus() and define a Java class „Manager“ which uses this interface without implementing bonus() method. Also define another Java class „Sub staff“ which extends from „Manager“ class and implements bonus() method. Write the complete program to find out earnings, deduction and bonus of a sub staff with basic salary amount entered by the user as per the following guidelines – earnings basic + DA (80% of basic) + HRA (15% of basic)deduction PF 12% of basic ,bonus 50% of basic.

Code:-

```
import java.util.Scanner;
interface salary
{
    public void earnings();
    public void charges_deduction();
    public void bonus();
}

abstract class Manager implements salary
{
    double earning,deduction;
    public void earnings()
    {
        System.out.println("Manager implements the method of earnings.");
    }
    public void charges_deduction()
    {
        System.out.println("Manager implements the method of deductions.");
    }
}

class Substaff extends Manager implements salary
{
    double b_salary,bonus;
    Substaff(int bs)
    {
        b_salary=bs;
    }
    public void calculate()
    {
        earning=b_salary+(0.8*b_salary)+(0.15*b_salary);
        deduction=0.12*b_salary;
        bonus=0.5*b_salary;
    }
    public void bonus()
    {
        System.out.println("Substaff implementing the method bonus.");
    }
    public void display()
    {
        System.out.println("Earning of the employee : "+earning);
        System.out.println("Deduction of the employee : "+deduction);
        System.out.println("Bonus of the employee : "+bonus);
    }
}
```

```

    }
}

public class q3
{
    public static void main(String args[])
    {
        Scanner sc=new Scanner(System.in);
        int a;
        System.out.println("Enter the basic salary:-");
        a=sc.nextInt();

        Substaff st=new Substaff(a);
        st.calculate();
        st.bonus();
        st.display();
    }
}

```

Output:-

Enter the basic salary:-

100000

Substaff implementing the method bonus.

Earning of the employee : 195000.0

Deduction of the employee : 12000.0

Bonus of the employee : 50000.0

Screenshot:-

```
Enter the basic salary:-  
100000  
Substaff implementing the method bonus.  
Earning of the employee : 195000.0  
Deduction of the employee : 12000.0  
Bonus of the employee : 50000.0
```

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