Roll No	: 7824
Assignment No	: 1
Assignment Name	: Write a Java program to find out Prime Factors of a given number

Program:

```java
import   java.util.Scanner;

class prime_fact

{

public static void main(String[ ]args)

{

        Scanner rk = new Scanner(System.in);
        System.out.println("Please Enter a no:");
        int no = rk.nextInt();
        int temp,i = 2;

        temp = no;
        System.out.println("Prime factor of no is:");

        while(temp >1)
    {

        if(temp%i= =0)
        {
         System.out.print(i+" ");
          temp = temp/i;
        }
         else
        {
           i++;
        }

    }

  }

 }
```

Output:

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java > javac prime_fact.java

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java> java prime_fact

Please Enter a no:

15

Prime factor of no is:

3 5

Roll No	: 7824
Assignment No	: 2
Assignment Name	: Write a Java program to convert Binary number into Decimal number.

Program:

```java
import  java.util.Scanner;

class  bin_to_dec
{
        public  static void main(String[ ] args)
    {

        Scanner rk  = new Scanner(System.in);
        System.out.println("Enter any binary no:");
        int no = rk.nextInt();
        int d = 0,t = no,i = 0;

        while(t > 0)
        {
            int r = t%10;
            t = t/10;
            d = d+r*(int)Math.pow(2, i++);

        }
        System.out.println("Decimal of:"+no+"is:"+d);
    }

}
```

Output:

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java >javac bin_to_dec.java

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java >java bin_to_dec

Enter any binary no:

10101110

Decimal of: 10101110 is: 174

Program:

```java
import  java.util.Scanner ;

class   even_or_odd

 {
      public static void main(String[ ] args)

     {

            Scanner rk = new Scanner(System.in);
            System.out.println("Please Enter any no");
            int no = rk.nextInt();

            int add = 0, add1= 0;

            while(no !=0)
            {
              int temp = no;
              temp = temp%10;

                  if(temp % 2! =0)
                  {
                  add = add + temp;
                  }
                  else
                  {
                  add1 = add1+temp;
                  }
                  no = no/10;
            }
            System.out.println("Addition of odd digit is:"+add);
            System.out.println("Addition of even digit is:"+add1);

     }

}
```

Output:

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java>javac even_or_odd.java

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java>java even_or_odd

Please Enter any no

12345678

Addition of odd digit is: 16

Addition of even digit is: 20

Roll No	: 7824
Assignment No	: 4
Assignment Name	: Write a Java program to implement Parameterized Constructor

Program:

```java
class Param_cons
{
  int id ,Salary;
  String name;
  Param_cons( int p1,String p2,int p3)
  {
    id = p1;
    name = p2;
    Salary = p3;
  }
    void display()
  {
    System.out.println("Employ Id is:"+""+id);
    System.out.println("Employ name is :"+""+name);
    System.out.println("Employ Salary is:"+Salary) ;
  }
    public static void main(String[ ]args)
  {
    Param_cons p = new Param_cons(1947,"Rushikesh Kore",1000000);
    p.display();
  }
}
```

<u>Output:</u>

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java>javac Param_cons.java

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java>java Param_cons

Employ Id is: 1947

Employ name is: Rushikesh Kore

Employ Salary is: 1000000

Program:

```
Import  java.util.Scanner;

class  multi_in
    {
    public static void main(String[ ]args)

     {

          cd d = new cd();
          d.display();
          d.display1();
          d.final1();
      }

    }

          class a
    {
          Scanner  rk  = new Scanner(System.in);
          int  h,m,s ;

          void display()
          {
          System.out.println("Enter Actual Time:");

           System.out.println("Please Enter an Hours:");
          h = rk.nextInt();

          System.out.println("Please Enter an Minutes:");
          m = rk.nextInt();

          System.out.println("Please Enter an Seconds:");
          s = rk.nextInt();
           }
      }
```

```java
class b extends a
{

        int h1,m1,s1;
        void display1()
        {

        System.out.println("Enter over Time:");

        System.out.println("Please Enter an Hours:");
         h1= rk.nextInt();

        System.out.println("Please Enter an Minutes:");
        m1= rk.nextInt();

        System.out.println("Please Enter an Seconds:");
         s1=rk.nextInt();
        }
}
class cd extends b
{
         int h2,m2,s2;
         void final1()

        {

         h2 = h1+h;
         m2 = m1+m;
        s2 = s1+s;

         if(s2>60)
         {
          m2++;
          s2 = s2%60;
         }
         if(m2>60)
         {
         h2++;
        m2 = m2%60;
          }
         System.out.println("Total Working time is:"+h2+":"+m2+":"+s2);
          }
}
```

Output:

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java>javac multi_in.java

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java>java multi_in

Enter Actual Time:

Please Enter an Hours:

10

Please Enter an Minutes:

30

Please Enter an Seconds:

30

Enter over Time:

Please Enter an Hours:

2

Please Enter an Minutes:

15

Please Enter an Seconds:

10

Total Working time is: 12:45:40

Roll No	: 7824
Assignment No	: 6
Assignment Name	: Write a Java program to demonstrate Method Overloading

Program:

A] By Changing the number of Arguments.

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

  {
     a k = new a();
     k.sum(5, 10);
     k.sum(10, 20, 30);
  }
}
    class a
   {
     void sum(int a,int b)
      {
      int c = a+b;
      System.out.println("Addition is :"+c);
       }
      void sum( int x,int y,int z)
       {
       int d = x+y+z;
      System.out.println("Addition is :"+d);
        }

      }
```

Output:

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java> javac Method_over_a.java

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java>java Method_over_a

Addition is :15

Addition is :60

B] By Changing Data Types

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

       a k = new a();
       k.sum(5, 10);
       k.sum(10.2, 20.2);
     }
 }

class a
{
     void sum(int a,int b)
   {
       int c = a+b;
       System.out.println("Addition is :"+c);

    }
     void sum( Double x,Double y)
   {
       double d = x+y;
       System.out.println("Addition is :"+d);

    }

 }
```

Output:

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java >javac Method_over_b.java

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java>java Method_over_b

Addition is :15

Addition is :30.4

Roll No	: 7824
Assignment No	: 7
Assignment Name	: Write a Java program to demonstrate Method Overriding

Program:

```java
class Method_override

{

        public static void main(String[ ] args)

        {

        bike k = new bike();
        k.display( );
        k.display( );

        }
}
        class vehicle
{
         void display()
         {

         System.out.println("car is running");

         }

    }

        class bike extends vehicle
{
          void display()
        {
         System.out.println("Bike is running");
         }

    }
```

Output:

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java>javac Method_override.java

C:\Users\DELL\3D Objects\rk_1\Assignment_pdf_java>java Method_override

Bike is running

Bike is running

Roll No	: 7824
Assignment No	: 8
Assignment Name	: Write a Java program to demonstrate multiple catch statement

Program:

```java
public class test_n

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

    int a[ ]={5,10};

        int b=5;

        try
        {
        int x = a[2]/b-a[0];
        }

        catch (ArithmeticException e)
        {
            System.out.println("Divided by zero..!");
        }
        catch(ArrayIndexOutOfBoundsException p)
        {
            System.out.print("Array index error..!");

         }
        Finally
        {

            int y = a[1]/a[0];
            System.out.println("");
            System.out.println("Y is:"+y);

        }

    }
}
```

C:\Users\RK\3D Objects\CLASS\rk>javac test_n.java

C:\Users\RK\3D Objects\CLASS\rk>java test_n

Array index error..!

Y is: 2

Roll No	: 7824
Assignment No	: 9
Assignment Name	: Write a Java program to demonstrate mechanism of package

Program:

1) a.java

```java
package  calculator;

public class a

{

        public void addition(double m, double n)

        {

                double r = m + n;

                System.out.println (" ");

                System.out.println ("Addition of"+m+"and"+n+"is:"+r);

        }

        public void subtraction(double m, double n)

        {
                double k = m - n;

                System.out.println (" ");

                System.out.println ("Subtraction of"+m+"and"+n+"is:"+k);

        }

}
```

2) b.java

```java
package  calculator;

public  class b
{

        public void multiplication( double m, double n)

        {
                double p = m * n;

                System.out.println (" ");

                System.out.println ("Multiplication of"+m+"and"+n+"is:"+p);

         }

        public void division(double m , double n)

        {
                double d  = m / n;
                System.out.println (" ");
                System.out.println ("Division of"+m+"and"+n+"is:"+d);

         }


}
```

3) demo.java   //main java file

```java
import calculator.a;

import calculator.b;

import java.util.Scanner;

public class demo
{

        public static void main(String[ ] args)
        {
                Scanner rk = new Scanner (System.in);

                System.out.println ("Please Enter a First no :");

                double no1 = rk.nextDouble( );

                System.out.println (" ");

                System.out.println ("Please Enter a Second no :");

                double no2 = rk.nextDouble( );

                    a    dd = new a( );

                dd.addition(no1 , no2);
                dd.subtraction(no1 , no2);

                    b    kk =new b( );

                kk.multiplication(no1 ,no2);
                kk.division(no1 , no2);

        }


    }
```

Output:

C:\Users\RK\3D Objects\CLASS\rk>javac -d . a.java

C:\Users\RK\3D Objects\CLASS\rk>javac -d . b.java

C:\Users\RK\3D Objects\CLASS\rk>javac a.java

C:\Users\RK\3D Objects\CLASS\rk>javac b.java

C:\Users\RK\3D Objects\CLASS\rk>javac demo.java

C:\Users\RK\3D Objects\CLASS\rk>java demo
Please Enter a First no:
10

Please Enter a Second no:
20

Addition of 10.0 and 20.0 is: 30.0

Subtraction of 10.0 and 20.0is: -10.0

Multiplication of 10.0 and 20.0 is: 200.0

Division of 10.0 and 20.0 is: 0.5

Roll No : 7824

Assignment No : 10

Assignment Name : Write a Java program to demonstrate layout manager

Program:

```java
import java.awt.*;

import java.awt.event.*;

public class awte2

{

    public static void main(String[ ] args)

        {
        Frame  f = new Frame();

         Label  l1 = new Label("Enter Name:");
         l1.setBounds(50, 70, 150, 30);
         f.add(l1);

         TextField  t1 = new TextField();
         t1.setBounds(200, 70, 220, 30);
         f.add(t1);

         Label  l2 = new Label("Enter Roll no: ");
         l2.setBounds(50, 140, 150, 30);
         f.add(l2);

         TextField  t2 = new TextField();
         t2.setBounds(200, 140, 200, 30);
         f.add(t2);

         Label  l3 = new  Label("Enter Address:");
         l3.setBounds(50, 210, 150, 30);
         f.add(l3);

         TextField  t3  = new TextField();
```

```java
        t3.setBounds(200, 210, 200, 50);
        f.add(t3);

        Label   l4 = new Label("Enter Post no:");
        l4.setBounds(50, 280, 150, 30);
        f.add(l4);

        TextField   t4 = new TextField();
         t4.setBounds(200, 280, 220, 30);
        f.add(t4);


        Button b = new Button("Submit");
         b.setBounds(50,350,150,30);

        Label   t5 = new Label ();
        t5.setBounds(200, 420, 200, 40);
         f.add(t5);


        Label   t6 = new Label ();
        t6.setBounds(200, 480, 200,40 );
        f.add(t6);


        Label   t7 = new Label ();
        t7.setBounds(200, 550, 220, 50);
        f.add(t7);


        Label  t8 = new Label ();
        t8.setBounds(200, 620, 220, 30);
        f.add(t8);


b.addActionListener(new ActionListener()

{

     public  void actionPerformed(ActionEvent e)

     {
```

```java
            String a = t1.getText();

            String b = t2.getText();
            int n = Integer.parseInt(b);
            String c = t3.getText();

            String d = t4.getText();
            int nn = Integer.parseInt(d);

            t5.setText("Your Name is :"+a);
            t6.setText("Your Roll no is :"+n);
            t7.setText("Your Address is :"+c);
            t8.setText("Your Post no is :"+nn);


                }
            }
    );
                f.add(b);
                f.setSize(800,800);
                f.setLayout(null);
                f.setVisible(true);


        }

}
```

Output:

Enter Name: Rushi Kore

Enter Roll no: 7824

Enter Address: Shirdhon,Tal-Shirol.

Enter Post no: 416121

[Submit]

Your Name is :Rushi Kore

Your Roll no is :7824

Your Address is :Shirdhon,Tal-Shirol.

Your Post no is :416121