1.Display prime numbers between 1 and 100 or 1 and n

1 and 100

```
public class Yasin
        {
                public static void main(String arg[])
                {

            System.out.println("Enter a number ");
                Scanner sc=new Scanner(System.in);
                int n=sc.nextInt();
                primeCal(n);
                }

          static void primeCal(int num)
          {
                int count=0;
                for(int i=1;i<=num;i++)
                {
                  if(num%i==0)
                  {
                      count++;
                  }
          }
                if(count==2)
                  System.out.println("prime number ");
                else
                  System.out.println("Not a prime number ");
          }
        }
```

Output :

```
        Enter a number
              7
        prime number
```

1 to n

```
   class Yasin
        {
                public static void main(String arg[])
                {
                        int i,count;
                        System.out.print("Enter n value : ");
                        Scanner sc=new Scanner(System.in);
                         int n=sc.nextInt();
                          System.out.println("Prime numbers between 1 to "+n+" are ");
                           for(int j=2;j<=n;j++)
                           {
                                   count=0;
                                   for(i=1;i<=j;i++)
                                   {
```

```
                    if(j%i==0)
                    {
                        count++;
                    }
                }
            if(count==2)
                System.out.print(j+"  ");
            }
        }
    }
```

Output : Prime numbers between 1 to 100 are
2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73
79 83 89 97

2. Swap 2 no without using 3rd variable Program in java

```
package symbiosis;
import java.util.*;
public class Example {
    public static void main(String[] args)
        {
            int  x, y;
            System.out.println("Enter x and y");
            Scanner in = new Scanner(System.in);
            x = in.nextInt();
            y = in.nextInt();
            System.out.println("Before Swapping\nx = "+x+"\ny = "+y);
            x = x + y;
            y = x - y;
            x = x - y;
            System.out.println("After Swapping\nx = "+x+"\ny = "+y);
        }
    }
```

3.Find The Factorial of a Number

```
package symbiosis;
import java.util.*;
public class Example {
    public static void main(String[] args)
        {
            int n=6;
            long fac=1;
            for(int i=1;i<=n;i++)
                {
                    fac * =i;
                    System.out.println(“Factorial is ” + fac);
                }
        }
```

Output: 720

4.Java Program to Check Palindrome Number

```
public class Yasin {
  public static void main(String[] args) {
            int num = 3553, reversed= 0, remainder;
            int original = num;
            while (num != 0) {
              remainder = num % 10;
              reversed = reversed * 10 + remainder;
              num /= 10;
            }
            if (original== reversed)
             {  System.out.println(original + " is Palindrome."); }
            else
              { System.out.println(original + " is not Palindrome."); }

          }
   }
```

Output : 3553 is Palindrome.

5. Print Fibonacci series till n

```
package symbiosis;
 import java.util.*;
  public class Example {
      public static void main(String[] args)
            {
               int  i = 1,n,  firstTerm = 0, secondTerm = 1;;
               System.out.println("Enter x and y");
               Scanner in = new Scanner(System.in);
               n= in.nextInt();
              while (i <= n) {
                        System.out.print(firstTerm + ", ");
                        int nextTerm = firstTerm + secondTerm;
                        firstTerm = secondTerm;
                        secondTerm = nextTerm;
                       i++ ;
                }
          }
  }
```

6.Add two integer variables in 5 different ways using functions and control statement

1.

```
package yasin;
  public class Assignment_3 {
          public static int addTwoNumber(int A, int B)
          {
             return A + B;
          }
          public static void main(String[] args) {
                    int A = 4, B = 11;

                    System.out.println("sum = " + addTwoNumber(A,B));
          }

    }
```

2

.

```
package yasin;
  public class Assignment_3 {
          public static int addTwoNumber(int A, int B)
          {
            return A - (-B);
          }
          public static void main(String[] args) {
                    int A = 4, B = 11;

                    System.out.println("sum = " + addTwoNumber(A,B));
          }

    }
```

3.

```
package yasin;
  public class Assignment_3 {
          public static int addTwoNumber(int A, int B)
          {
            while (A > 0) { A--; B++; }
         while (A < 0) { A++; B--; }
         return B;
          }
          public static void main(String[] args)
          {
                    int A = 4, B = 11;
                    System.out.println("sum = " + addTwoNumber(A,B));
              }
    }
```

4

.

```
package yasin;
  public class Assignment_3 {
          public static void addTwoNumber(int A, int B)
          {
```

```
        System.out.println(A+B);
    }
    public static void main(String[] args)
    {
            int A = 4, B = 11;
            addTwoNumber(A,B);
        }
}
```

5.

```
package yasin;
public class Assignment_3 {
    public static void addTwoNumber(int A, int B)
    {
        int sum=A+B;
         System.out.println("Sum is "+sum);
    }
    public static void main(String[] args)
    {
            int A = 4, B = 11;
            addTwoNumber(A,B);
        }
}
```

7.Find Square root of a number without sqrt method

```
import java.util.Scanner;
public class Yasin
{
        public static void main(String[] args)
        {
                System.out.print("Enter a number: ");
                Scanner sc = new Scanner(System.in);
                int n = sc.nextInt();
                System.out.println("The square root of "+ n+ " is: "+squareRoot(n));
         }
                public static double squareRoot(int num)
                {
                        double t;
                        double sqrtroot=num/2;
                        do
                        {
                                t=sqrtroot;
                                sqrtroot=(t+(num/t))/2;
                        }
                        while((t-sqrtroot)!= 0);
                        return sqrtroot;
                }
```

```
    }
```

8.Check Armstrong number

```
public class Yasin {
    public static void main(String[] args) {
        int no = 371, originalNumber, remainder, result = 0;
        originalNumber = no;
            while (originalNumber != 0)
             {
                remainder = originalNumber % 10;
                result += Math.pow(remainder, 3);
                 originalNumber /= 10;
              }
             if(result == no)
                System.out.println(no + " is an Armstrong number.");
             else
                 System.out.println(no + " is not an Armstrong number.");
        }
    }
```

Output : 371 is an Armstrong number.

9.Calculate grades of students using their marks

```
public class Yasin {
  public static void main(String[] args) {
          System.out.println("Enter Marks :");
              Scanner sc =new Scanner(System.in);

              System.out.println("JAVA:");  int java=sc.nextInt();
              System.out.println("IP:"); int IP=sc.nextInt();
              System.out.println("OPERATING SYSTEM:"); int os=sc.nextInt();
              System.out.println("COMPUTER NETWORKS:"); int cn=sc.nextInt();
              System.out.println("COMPUTER GRAPHICS:"); int cg=sc.nextInt();
              System.out.println("COMPLIER CONSTRUCTION:"); int cc=sc.nextInt();

                float avg=(cc+cg+cn+os+IP+java)/6;
                System.out.print("The student Grade is: "+ avg );
        }
}
```

10.use recursion find Factorial

```
public class Yasin {
  public static void main(String[] args) {
        Int n=6;
        long fact=mult(num);
```

```
            System.out.println(“Number is  :” + n + “ and  Factorial is “+ fact);
        }
                public static long mult(int num )
                    {
                      if(num>=1)
                          return num * mult(num-1);
                      else
                        return 1;
                    }
      }
Print Patterns
  // Increasing Triangle
          public class Yasin {
            public static void main(String[] args) {
                Scanner sc=new Scanner(System.in);
                 System.out.println("Eneter Number:");
                  int n =sc.nextInt();
                    for(int i=1;i<=n;i++)
                      {
                        for(int j=1;j<=i;j++)                    {
                         System.out.print("* ");
                        }
                        System.out.println();
                    }
      // Number Pattern
                     for(int i=1;i<=n;i++)
                        {
                                for(int j=i;j<=n;j++)
                                {
                                        System.out.print(" ");
                                }
                                for(int j=1;j<i;j++)
                        {
                                        System.out.print("1");
                                }
                                for(int j=1;j<=i;j++)
                                {
                                        System.out.print("1");
                                }
                                System.out.println();
                        }
```