## B.Bhagyasri(AF0315954)

1. Write a java program to check whether given number is Armstrong number or not

```
package armstrong;

import java.util.Scanner;

public class armnum {

	public static void main(String[] args) {

		int num,temp=0,r=0,sum=0;

		Scanner key = new Scanner(System.in);
		System.out.println("Enter a num");

		num=key.nextInt();
		 temp=num;
		while(num>0) {
			r=num%10;

		sum=sum+(r*r*r);
		num=num/10;
		}
		if(temp==sum)

			System.out.println("It is a armstrong number");

		else
			System.out.println("It is not a armstrong number");
```

```
    }
  }
```

Output:

Enter a num

153

It is a armstrong number

2. Write a Program to display all the Armstrong number between 10 to 1000

```
package armstrong;

public class armstrongnum {


    public static void main(String[] args) {
        // TODO Auto-generated method stub
        int i,r,n,sum=0;

        for(i=10;i<=1000;i++) {
            n=i;
            while(n>0) {
                r=n%10;

          sum=sum+(r*r*r);
          n=n/10;
            }
          if(sum==i) {

                System.out.println(i+ " ");
```

```
                        }
sum=0;
        }
}

}
```

Output:

153

370

371

407

3. Write a program to find sum of the following series

a. Sum = x-1/x+2/x-3/x….n/x

```
package tesla;
import java.util.*;
public class series {


    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner key=new Scanner(System.in);
        int n;
        double x,i,sum=0;
        System.out.println("Program to find sum of x-1/x+2/x-3/x….n/x ");
        System.out.println("Enter x value:");
        x=key.nextFloat();
        System.out.println("Enter n value:");
        n=key.nextInt();
```

```
                for(i=1;i<n;i++)
                {
                        if(i%2==0)
                        {
                                sum=sum+i/x;
                        }
                        else {
                                sum=sum-i/x;

                        }

                }
                System.out.println("Sum of series:"+sum);




        }

}
```

Output:

Program to find sum of x-1/x+2/x-3/x﷯.n/x

Enter x value:

5

Enter n value:

4

Sum of series:-0.39999999999999997

b. 1!+2!+3!+…..n!

```
package tesla;
import java.util.*;
public class series1 {



    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner sc =new Scanner(System.in);
        int i,n,j;
        long sum=0,fact=1;

        System.out.println("program to find sum of 1!+2!+3!+…..n! ");

        System.out.println("enter n value:");
        n=sc.nextInt();
        for(i=1;i<=n;i++);
        {
            fact=1;

            for(j=1;j<=n;j++)
            {
                fact=fact*j;

                System.out.print(j+"! + ");

            }
```

```
                sum=sum+fact;

            }
            System.out.println("\n sum of above series:"+sum);
        }

}
```

Output:

program to find sum of 1!+2!+3!+&#65533;..n!

enter n value:

5

1! + 2! + 3! + 4! + 5! +

sum of above series:120

4. Write a java program to check given number is perfect number or not

```
package perfect;
import java.util.*;
public class pernum {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        int num,i,sum=0;
        Scanner key=new Scanner(System.in);
        System.out.println("enter a num");
        num=key.nextInt();
```

```
            for(i=1;i<=num;i++) {
                if (i%num==0) {
                    sum=sum+i;
                }
            }
                if(sum==num) {
                    System.out.println(num+"perfect num");
                }
                else {
                    System.out.println(num+"not a perfect num");
            }

        }
}
```

Output:

enter a num

28

28perfect num

5. Display all perfect numbers between 1 to 100000

```
package perfect;

public class perfectnum {

    public static void main(String[] args) {
        int i,j,sum=0;

            for(i=1;i<100000;i++) {
                for(j=1;j<=i-1;j++) {
```

```
                    if(i%j==0) {
                        sum=sum+j;
                }
                }
                    if(sum==i) {

                        System.out.println(sum);
                }
                    sum=0;
                }


        }
}
```

Output:

6

28

496

8128

6. Write a program to extract only character from a string. Eg: Af02284khff -> Afkhff

```
package tesla;
import java.util.Scanner;
public class extract {


        public static void main(String[] args) {
            // TODO Auto-generated method stub
```

```
        String text, digits="", string="",symbols="";
        char ch;
        int i;
    text= "Af02284khff";

        for(i=0;i<text.length();i++)
        {
            ch = text.charAt(i);

            if(ch>='0' & ch<='9')
                digits=digits +ch;
            else if(ch>='a' & ch<='z' | ch>='A' & ch<='Z')
            string=string + ch;
            else if(ch!=' ')
                symbols = symbols + ch;
        }

        System.out.println("extracted digits "+ digits);
        System.out.println("extracted string "+ string);


    }
}
```

Output:

extracted digits 02284

extracted string Afkhff

7. Write a program to find reverse of digits

```
package tesla;
import java.util.*;
public class reverse {


        public static void main(String[] args) {
                // TODO Auto-generated method stub
                Scanner obj=new Scanner(System.in);

    int num, num1, r, reverse=0;

                System.out.println("Enter your number");

                num = obj.nextInt();
                num1=num;
                while(num>0)
                {
                        r=num%10;
                        reverse= (reverse*10) +r;
                        System.out.print(r);
                        num=num/10;
                }
                System.out.println();
}
}
```

Output:

Enter your number

451

154

8. Write a program to find power value of given base and exponent number

```
package tesla;

public class power {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        int base = 3, exponent = 4;

      long result = 1;

      while (exponent != 0) {
       result *= base;
       --exponent;
      }

      System.out.println("Answer = " + result);
     }
    }
```

Output:

Answer = 81

9. Write a program to convert every first letter of string to capital letter

a. eg: the Hindu -> The Hindu

```
package tesla;
import java.util.*;
```

```
public class Capital {



	public static void main(String[] args) {
		// TODO Auto-generated method stub

		String str = "the Hindu";
		String output= str.substring(0,1).toUpperCase()+str.substring(1);



		System.out.println(output);



	}

}
```

Output:

The Hindu

10. Write a program to count no. of digits present in a string

```
package tesla;
import java.util.*;
public class numofdigits {
```

```
	public static void main(String[] args) {
		// TODO Auto-generated method stub
		int num=287879646;
	   int count=0;
	   while(num!=0) {
		num/=10;
			count++;


	   }
			System.out.println(count);


	}
```

Output:

9