

Method_Overriding

1.Sum of Digit 2. Armstrong Number between 1 to 1000.

```
public class Method_Overriding {

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

        Program obj=new Program();
        obj.sum();
        Program obj1=new Program1();
        obj1.sum();
    }
}
class Program
{
    void sum()
    {
        int sum=0,r,n=1234;

        while(n>0) {

            r=n%10;
            sum=sum+r;
            n=n/10;
        }
        System.out.println("Sum of Digit:" +sum);
    }
}
class Program1 extends Program
{
    void sum()
    {
        System.out.println("\nArmstrong Number from 1 to 1000 :");

        for(int i=1;i<=1000;i++)
        {
            int num=i;
            int sum=0;
            while(num>0)
            {
                int remainder=num%10;
                sum=sum+(remainder*remainder*remainder);
                num=num/10;
            }
            if(sum==i)
            {
                System.out.print(i+"\n");
            }
        }
    }
}
```

}

OUTPUT-

```
Sum of Digit:10
```

```
Armstrong Number from 1 to 1000 :
```

```
1
```

```
153
```

```
370
```

```
371
```

```
407
```

```
|
```

Encapsulation-

1.WAP to accept name,roll no,marks of 5 subject,calculate percentage and grade display.(Per,Grade)

```
class studentdetails {  
  
    private String name,grade;  
    private int roll_no,m1,m2,m3,m4,m5,total;  
    private double per;  
  
    void set_Name(String name,int roll_no) {  
  
        this.name=name;  
        this.roll_no=roll_no;  
    }  
  
    void get_Name() {  
  
        System.out.println("student name is:"+name);  
        System.out.println("\nstudent roll_no is:"+roll_no);  
    }  
    void set_Marks(int m1,int marks2,int marks3,int marks4,int marks5) {  
  
        this.m1=m1;  
        m2=marks2;  
        m3=marks3;  
        m4=marks4;  
        m5=marks5;  
    }  
  
    void get_Marks() {  
  
        System.out.println("\nstudent marks of English Subject is : " +m1);  
        System.out.println("\nstudent marks of Science Subject is : " +m2);  
        System.out.println("\nstudent marks of Computer Subject is : " +m3);  
        System.out.println("\nstudent marks of Maths Subject is : " +m4);  
        System.out.println("\nstudent marks of Physics Subject is : " +m5);  
        System.out.println("\ntotal marks is : " +total);  
        System.out.println("\npercentage is : " +per);  
        System.out.println("\ngrade is : " +grade);  
    }  
    void calculate()  
    {  
        total=m1+m2+m3+m4+m5;  
        per=(total/500.0)*100;  
        grade="";  
        if(per>=90)  
            grade="A+";  
        else if(per>=80)
```

```

        grade="A";
    else if(per>=70)
        grade="B+";
    else if(per>=60)
        grade="B";
    else if(per>=50)
        grade="C";
    else if(per>=40)
        grade="D";
    else
        grade="E";
    }
}

public class Encapsulation_Program {

    public static void main(String args[]) {

        studentdetails st=new studentdetails();

        st.set_Name("Apeksha", 1);
        st.set_Marks(67, 78, 89, 56, 90);
        st.get_Name();
        st.calculate();
        st.get_Marks();

        System.out.println("\n.....\n.....\n");
        st.set_Name("Tina", 2);
        st.set_Marks(87, 92, 73, 86, 90);
        st.get_Name();
        st.calculate();
        st.get_Marks();
    }
}

```

OUTPUT-

student name is:Apeksha

student roll_no is:1

student marks of English Subject is : 67

student marks of Science Subject is : 78

student marks of Computer Subject is : 89

student marks of Maths Subject is : 56

student marks of Physics Subject is :90

total marks is : 380

percentage is :76.0

grade is : B+

.....
.....

student name is:Tina

student roll_no is:2

student marks of English Subject is : 87

student marks of Science Subject is : 92

student marks of Computer Subject is : 73

student marks of Maths Subject is : 86

student marks of Physics Subject is :90

total marks is : 428

percentage is :85.6

grade is : A