- Create a package CIE which has two classes Student and internals. The class Personal has members like USN, name, sem. The class Internals has an array that stores the internal marks scored in five courses of the current sem of the student. Create another package SEE which has the class External which is a derived class of Student.
This class has an array that stores SEE marks scored in five courses of the current semester of student. Import the two packages in a file that declares the final marks of n students in all Five courses

⇒

```
package CIE;
import java.util.*;
public class Student
{

    public int sem;
    String usn;
    String name;
public void accept( )
{

    Scanner sc= new Scanner (System.in)
    System.out.println ("Enter sem, USN & name:\n
    Sem = sc.nextInt();
    USN = sc.nextLine();
    Name =sc.nextLine();
}
}
```

```
public class Internals
{
    public int im[] = new int [5];
}

package SEE;
import CIE.Student;
public class External extends Student
{
    public int sm[] = new int [5] };

import java.util.*;
import SEE.*;
import CIE.*;
public class FinalMarks
{
    public static void main (String args[]).
    {
        int fm[] = new int [5];
        Scanner sc = new Scanner (System.in).
        System.out.println ("Enter no of students: ");
        int n = sc.nextInt();
        SEE.External st[ ]= new SEE.External [n]
        CIE.Internals s[ ]= new CIE.Internals[n];
        for (int i=0; i<n; i++)
        {
            st[i] = new SEE.External();
            s[i] = new CIE.Internals();
        System.out.println ("Enter details " + (i+1))
```

```
        s[i].accept();
        for (int j=0; j<5; j++)
    {
    System.out.println("Enter im and sm of
      sub" + (j+1));
          s[i].im[j] = sc.nextInt();
          s[i].sm[j] = sc.nextInt();
           fm[j] = s[i].im[j] + s[i].sm[j]
    }
      System.out.println("Final marks of" + s[i].name);
        for (int k=0; k<5; k++)
    {
        System.out.println("course" + (k+1) + "=" + fm[k]);
    }
    }
    }
```

Output:

Enter no of students: 1

Enter details of 1

enter usn name & sem: 1BM22CS027

AKANKSHA 2

Enter internal & external marks: 50 46

Enter internal & external marks: 49 47

Enter internal & en marks: 48 48

Enter internal & external mark: 47 49

Enter internal & external mark: 46 50

Final marks of akanksha

Course 1 = 96

Course 2 = 96

Course 3 = 96

Course 4 = 96

Course 5 = 96

Algorithm

1) Start
2) Create 2 packages as CIE and SEE
2) CIE consists of class which takes the personal details and another class which has an array for internal marks
3) Consider a package SEE which has an array to store SEE marks
4) Import these packages to the main file
5) Create two arrays one for no of students present and other array S[] has objects of CIE package
6) Access packages with help of these 2 arrays and calculate the final marks ie CIE + SEE marks
7) To display the final marks it should be stored in another array and print its content at each.
8) STOP

02.02.24

```
C:\Users\bmsce\Desktop\1bm22cs027 ooj\week 6>javac -d . FinalMarks.java

C:\Users\bmsce\Desktop\1bm22cs027 ooj\week 6>java FinalMarks
AKANKSHA SINGA
1BM22CS027
enter no. of students:
2
Enter details of 1
enter usn name and sem:
1BM22CS027
AKANKSHA
2
Enter internal and external marks:
49
49
Enter internal and external marks:
50
50
Enter internal and external marks:
48
48
Enter internal and external marks:
47
47
Enter internal and external marks:
46
46
Final marks of AKANKSHA
Course 1=98
Course 2=100
Course 3=96
Course 4=94
Course 5=92
Enter details of 2
enter usn name and sem:
1BM22CS027
akanksha
1
Enter internal and external marks:
50
46
Enter internal and external marks:
49
47
Enter internal and external marks:
48
48
Enter internal and external marks:
47
49
Enter internal and external marks:
50
46
Final marks of akanksha
Course 1=96
Course 2=96
Course 3=96
Course 4=96
Course 5=96
```