6.

Create a package CIE which has 2 classes Student & internals. The class Student has members like usn, name, sem. The class internal has an array that stores the internal marks scored in 5 courses of the sem. Create a package SEE which has the class External which is a derived class of Student & has an array that stores the marks scored in the SEE. Import the packages in a file that deter the final marks.

```
package CIE;
import java.util.*;
public class Student
{
    public int sem;
    public String usn;
    public String name;

    public void getdetails()
    {   Scanner sc = new Scanner(System.in);
        System.out.println("Enter the sem, usn, name");
        sem = sc.nextInt();
        usn = sc.nextLine();
        name = sc.nextLine();
    }
}
```

```
package CIE;
import java.util.*;
public class Internals
{   int marks[] = new int[5];
    for(i=0; i<5; i++)
    {   System.out.println("Enter the marks for course "+(i+1));
        marks[i] = sc.nextInt();
    }
```

```
package SEE;
import CIE.*
public class External extends Student
{
    public int external[] = new Int[5];
}
```

```
import java.util.*;
import CIE.*;
import SEE.*;
public class Final
{
    public static void main(String args[])
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter n");
        int n = sc.nextInt();
        External st[] = new External[n];
        Internals si[] = new Internal[n];
        for(int i=0; i<n; i++)
        {
            CIE.Internal = new Internals();
            SEE.External = new External();
            System.out.println("Enter details of student "+(i+1));
            st[i].getdetails();
            for(int j=0; j<5; j++)
            {
                System.out.println("Enter internal & external marks of student"
                +(i+1));
                st[i].marks[j] = sc.nextInt();
                si[i].external[j] = sc.nextInt();
                fm[j] = st[i].marks[j] + si[i].external[j]
            }
        }
```

public int fm[] = new Int[5]

```
System.out.println("The final mark of student "+st[i].name
for(int a=0;a<5;a++)
{
    System.out.println("Course "+(a+1)+": "+fm[i]);
}
}
}
```

Algorithm

Step 1: create package CIE with class Student containing sem, usn, name as data mem
create a method getdetails to accept user input.

Step 2: In package CIE, create class internals which contain array marks

Step 3: create package SEE which has array external inside the class external

Step 4: create class Final with main method & import CIE & SEE packages.

Step 5: get input of n.

```
for(int i=0;i<n;i++)
{
    get the details of stud
    st[i].getdetails();

    for(int j=0;j<5;j++)
    {
        get input of internal & external marks
        st[i].mark[j]=sc.nextInt();
        s[i].external[j]=sc.nextInt();
        fm[j]=st[i].mar[j]+s[i]+external[j];
    }
}
```

Step 6: display the final mark

Output:

Enter 4

1

Enter details of student:

Enter sem, usn, name

3

1BM22CS004

Abhinav

Enter internal & external mark of student:

20 20

40 40

50 50

30 30

30 35

The final mark of Student Abhi

course 1 40

course 2 80

course 3 106

course 4 60

course 5 65

08.02.24

```
C:\Users\Admin\Desktop\CS-013\Java>javac FinalMarks.java

C:\Users\Admin\Desktop\CS-013\Java>java FinalMarks
Enter the number of students
1
Enter Details of student 1
Enter the student's USN,Name and Semester
13
Adi
1
Enter Internal Marks and Semester End Marks of subject1
15
60
Enter Internal Marks and Semester End Marks of subject2
16
60
Enter Internal Marks and Semester End Marks of subject3
17
60
Enter Internal Marks and Semester End Marks of subject4
18
60
Enter Internal Marks and Semester End Marks of subject5
19
60
Final marks ofAdi
Course1=75
Course2=76
Course3=77
Course4=78
Course5=79

C:\Users\Admin\Desktop\CS-013\Java>
```