6. Program:

CIE.java

```
package cie;
import java.util.Scanner;
class Student {
    String name;
    String USN;
    int sem;
void setStudent (String nam, String sn, int semes
        name = nam;
        usn = sn;
        sem = semester;
    }

class Internals extends Student {
    Scanner reader = new Scanner(System.in);
    int [] inmarks = new int[5];
    Internals( ) {
        for(int i=0; i<5; i++){
            System.out.println("Enter internal marks of
            inmarks[i] = reader.nextInt;
        }
    }
}
```

SEE.java

```
package see;
import java.util.Scanner;
import java.lang.Math;
```

```
            System.out.println("Enter external mar
            exmark[i] = reader.nextInt();
        }
    }
}
```

Marks.java

```
import cie.*;
import see.*;
import java.util.Scanner;
import java.lang.Math;

~~class~~ public class Marks {
    public static void main(String[] args
        int i,j;
        ~~double~~ //int final marks;
        Scanner reader = new Scanner(Syste
        ~~Internals[] intarr = new~~ ;
        System.out.println("Enter the value
        int n = reader.nextInt();
        Internals[] intarr = new Internals
        Externals[] extarr = new Externals
        String name, usn;
        int semester;
        for(i=0; i<n; i++){
            System.out.println("Enter name");
```

```
Externals studex = new Externals();
studin.setStudent(name, usn, sem
studex.setStudent(name, usn, semest
intarr[i] = studin;
extarr[i] = studex;
}
for(i=0; i<n; i++){
System.out.println("name: "+intarr[i].name);
System.out.println("USN: " + intarr[
System.out.println("Sem: " + intarr[i
for(j=0; j<5; j++){
intarr[i].
System.out.println("Course"+(j+1)+": "
(intarr[i].marks[j] + Math.ceil(ex
ks[i]/2));
}
System.out.println(" ");
}
}
}
```

Algorithm:

step 1: Start

step 2: initialize int i, j,

step 3: Create a new Scanner called reac

step 4: Prompt the user for the value of

prompt the users for the nam
semester of the student.

step 8: Create new ~~int~~ ~~stud~~ Internals
& Externals object studex.

step 9: While creating the objects,
for(i=0; i<5; i++){
Enter the marks scored in
}

step 10: Store studin in inteav[i] & st
extav[i]

step 11: Exit the for loop after the co

step 12: for(~~int~~ i=0; i<n; i++){
print name, usn & sem

step 13: for(j=0; j<~~n~~ 5; j++){
print the final marks whic
inteav[i].inmarks[j]+Math.ceil(
exmarks[j]/2) in course j+

step 14: After the condition fails,

step 15: Print a new line

step 16: Exit the for loop after the

step 17: End.

Output:

Enter the value of n
2
Enter name:

Enter internal marks of course 2:
46
Enter internal marks of course 3:
47
Enter internal marks of course 4:
48
Enter internal marks of course 5:
49
Enter external marks of course 1:
100
Enter external marks of course 2:
99
Enter external marks of course 3:
98
Enter external marks of course 4:
97
Enter external marks of course 5:
96
Enter name:
Aman
Enter USN:
034
Enter semester:
1
Enter internal marks of course 1:
45

```
Enter the value of n
2
Enter name:
Agneya
Enter usn:
024
Enter semester:
3
Enter internal marks of course 1:
45
Enter internal marks of course 2:
46
Enter internal marks of course 3:
47
Enter internal marks of course 4:
48
Enter internal marks of course 5:
49
Enter external marks of course 1:
100
Enter external marks of course 2:
99
Enter external marks of course 3:
98
Enter external marks of course 4:
97
Enter external marks of course 5:
96
Enter name:
Aman
Enter usn:
034
Enter semester:
1
Enter internal marks of course 1:
45
```

```
Enter internal marks of course 2:
46
Enter internal marks of course 3:
47
Enter internal marks of course 4:
48
Enter internal marks of course 5:
49
Enter external marks of course 1:
70
Enter external marks of course 2:
75
Enter external marks of course 3:
80
Enter external marks of course 4:
85
Enter external marks of course 5:
90
Name: Agneya
USN: 024
Sem 3
Course 1:95.0
Course 2:96.0
Course 3:96.0
Course 4:97.0
Course 5:97.0

Name: Aman
USN: 034
Sem 1
Course 1:80.0
Course 2:84.0
Course 3:87.0
Course 4:91.0
Course 5:94.0

1BM22CS024 Agneya D A
PS C:\Users\bmsce\Desktop\1BM22CS024\lab 6>
```