

Name : Sakshi. P. Khandoba
USN : 1BM19CS139
Section : 3c
Batch : 2

papergrid

Date: 20/11/20

6. 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 semester 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 the SEE marks scored in five courses of the current semester of the student. Import the two packages in a file that declares the final marks of n students in all five courses. Solve this program and write the procedure you have used to execute it.

In CIE package, Student.java →

```
package CIE;

public class Student
{
    public String usn;
    public String name;
    public int sem;
    public Student (String usn, String name, int sem)
    {
        this.usn = usn;
        this.name = name;
        this.sem = sem;
    }
}
```

In CIE package, Internals.java →

```
package CIE;
import java.util.Scanner;
```

```

public class Internals extends Student
{
    Scanner in = new Scanner(System.in);
    public int[] cie = new int[5];
    public Internals(String usn, String name, int sem)
    {
        super(usn, name, sem);
    }
    public void get_data()
    {
        for(int i=0; i<5; i++)
        {
            System.out.print("Enter CIE marks of
            the student in Subject " + (i+1) +
            " (out of 50): ");
            cie[i] = in.nextInt();
        }
    }
}

```

```

In SEE package, External.java
package SEE;
import java.util.Scanner;
public class External extends CIE.Student
{
    public External(String usn, String name, int sem)
    {
        super(usn, name, sem);
    }
    Scanner in = new Scanner(System.in);
    public int[] see = new int[5];
    public void get_data()
    {

```



```

for(int i = 0; i < 5; i++) {
    System.out.print("Enter SEE marks of
    the student in Subject " + (i+1) +
    " (out of 100) : ");
    see[i] = in.nextInt();
}
}

```

In default package, final_marks.java →

```

import CIE.*;
import SEE.*;
import java.util.Scanner;
class final_marks {

```

```

    public static void main(String args[]) {

```

```

        Scanner in = new Scanner(System.in);
        System.out.print("Enter the number of students:");
        int n = in.nextInt();
        CIE.Internals obj[] = new CIE.Internals[5];
        SEE.External obj1[] = new SEE.External[5];
        int total = 0;
        for(int i = 0; i < n; i++) {
            System.out.println("\n Enter details of
            Student " + (i+1) + " : ");
            System.out.print("USN : ");
            String usn = in.next();
            System.out.print("Name : ");
            String name = in.next();
            System.out.print("Semester : ");
            int sem = in.nextInt();

```

```

obj[i] = new CIE.Internals(usn, name, sem);
obj[i].get_data();
obj1[i] = new SEE.External(usn, name, sem);
obj1[i].get_data();
}
for(int i=0; i<n; i++)
{

```

```

    System.out.println("\n TOTAL MARKS OF
    STUDENT " + (i+1) + " (out of 100) is : ");

```

```

    for(int j=0; j<5; j++)
    {

```

```

        total = (obj[i].cie[j]) +
        (obj[i].see[j])/2);

```

```

        System.out.println("Subject " + (j+1)
        + " : " + total);
    }
}

```

```

}
}

```

```

}

```

```

}

```

```

}

```

```

}

```

```

}

```

```

}

```

```

}

```

```

}

```

```

}

```

```

}

```

```

}

```

```

}

```

```

}

```

```

}

```

```

}

```

```

}

```