Program 6

```
package CIE;

public class Personal {
    protected String usn;
    protected String name;
    protected int sem;

    public Personal(String usn, String name, int sem) {
        this.usn = usn;
        this.name = name;
        this.sem = sem;
    }

    public String getUsn() {
        return usn;
    }

    public String getName() {
        return name;
    }

    public int getSem() {
        return sem;
    }
}
```

// CIE/Internals.java

```
package CIE;

public class Internals extends Personal {
    private int[] internalMarks = new int[5];

    public Internals(String usn, String name, int sem, int[] internalMarks) {
        super(usn, name, sem);
        this.internalMarks = internalMarks;
    }

    public int[] getInternalMarks() {
        return internalMarks;
    }
}
```

// SEE/External.java

```
package SEE;

import CIE.Personal;

public class External extends Personal {
    private int[] seeMarks = new int[5];

    public External(String usn, String name, int sem, int[] seeMarks) {
        super(usn, name, sem);
        this.seeMarks = seeMarks;
    }

    public int[] getSeeMarks() {
        return seeMarks;
    }
}
```

// Main.java

```
import CIE.*;
import SEE.*;

import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter the number of students: ");
        int n = scanner.nextInt();

        Personal[] students = new Personal[n];

        // Input for students in CIE and SEE
        for (int i = 0; i < n; i++) {
            System.out.println("\nEnter details for student " + (i + 1));

            // Input for Personal Information
            System.out.print("USN: ");
            String usn = scanner.next();
            System.out.print("Name: ");
            String name = scanner.next();
            System.out.print("Semester: ");
            int sem = scanner.nextInt();

            // Input for Internal marks (CIE)
```

```
    int[] internalMarks = new int[5];
    System.out.println("Enter internal marks for 5 courses:");
    for (int j = 0; j < 5; j++) {
        internalMarks[j] = scanner.nextInt();
    }

    // Create Internals object
    Internals internals = new Internals(usn, name, sem, internalMarks);

    // Input for External marks (SEE)
    int[] seeMarks = new int[5];
    System.out.println("Enter external marks for 5 courses:");
    for (int j = 0; j < 5; j++) {
        seeMarks[j] = scanner.nextInt();
    }

    // Create External object
    External external = new External(usn, name, sem, seeMarks);

    // Calculate and display the final marks
    System.out.println("\nStudent Details:");
    System.out.println("USN: " + internals.getUsn());
    System.out.println("Name: " + internals.getName());
    System.out.println("Semester: " + internals.getSem());

    System.out.println("\nInternal Marks:");
    int[] internalMarksArr = internals.getInternalMarks();
    for (int j = 0; j < 5; j++) {
        System.out.print(internalMarksArr[j] + " ");
    }

    System.out.println("\nExternal Marks:");
    int[] seeMarksArr = external.getSeeMarks();
    for (int j = 0; j < 5; j++) {
        System.out.print(seeMarksArr[j] + " ");
    }

    // Calculate final marks
    int totalMarks = 0;
    for (int j = 0; j < 5; j++) {
        totalMarks += internalMarksArr[j] + seeMarksArr[j];
    }

    System.out.println("\nFinal Marks (Total): " + totalMarks);
}

scanner.close();
```

```
    }
}
```

Output

```
Enter the number of students: 1

Enter details for student 1
USN: 1BM21CS001
Name: John
Semester: 5
Enter internal marks for 5 courses:
20 18 22 25 20
Enter external marks for 5 courses:
40 45 35 50 40

Student Details:
USN: 1BM21CS001
Name: John
Semester: 5

Internal Marks:
20 18 22 25 20
External Marks:
40 45 35 50 40
Final Marks (Total): 320
```