

Create a package CIE which has two classes - Personal 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 Personal. 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.

```
package cie;
```

```
public class internals {  
  
    public int[] internalMarks = new int[5];  
  
    public internals(int marks[]) {  
  
        for (int i = 0; i < 5; i++)  
  
            internalMarks[i] = marks[i];  
  
    }  
}
```

```
package cie;
```

```
public class personal {  
  
    public String usn;  
  
    public String name;  
  
    public int sem;
```

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

```
public void display() {  
  
    System.out.println("USN: " + usn);  
  
    System.out.println("Name: " + name);  
  
    System.out.println("Semester: " + sem);  
  
}  
}
```

// MAIN PROGRAM

```
import cie.*;
```

```
import java.util.*;
```

```
import see.*;
```

```
class finalMarks {
```

```
    public static void main(String args[]) {
```

```
        Scanner sc = new Scanner(System.in);
```

```
        System.out.print("Enter number of students: ");
```

```
int n = sc.nextInt();
```

```
internals[] internal = new internals[n];
```

```
external[] external = new external[n];
```

```
for (int i = 0; i < n; i++) {
```

```
    System.out.println("\nEnter details of student " + (i + 1));
```

```
    System.out.print("USN: ");
```

```
    String usn = sc.next();
```

```
    System.out.print("Name: ");
```

```
    String name = sc.next();
```

```
    System.out.print("Semester: ");
```

```
    int sem = sc.nextInt();
```

```
    System.out.println("Enter 5 Internal Marks:");
```

```
    int im[] = new int[5];
```

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

```
        im[j] = sc.nextInt();
```

```
    internal[i] = new internals(im);
```

```
    System.out.println("Enter 5 SEE Marks:");
```

```

        int sm[] = new int[5];

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

            sm[j] = sc.nextInt();

        external[i] = new external(usn, name, sem, sm);

    }

    System.out.println("\n----- FINAL MARKS OF STUDENTS -----");

    for (int i = 0; i < n; i++) {

        external[i].display();

        System.out.println("Final Marks (Internal + SEE):");

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

            int finalMarks = internal[i].internalMarks[j] + external[i].seeMarks[j];

            System.out.println("Course " + (j + 1) + ": " + finalMarks);

        }

        System.out.println();

    }

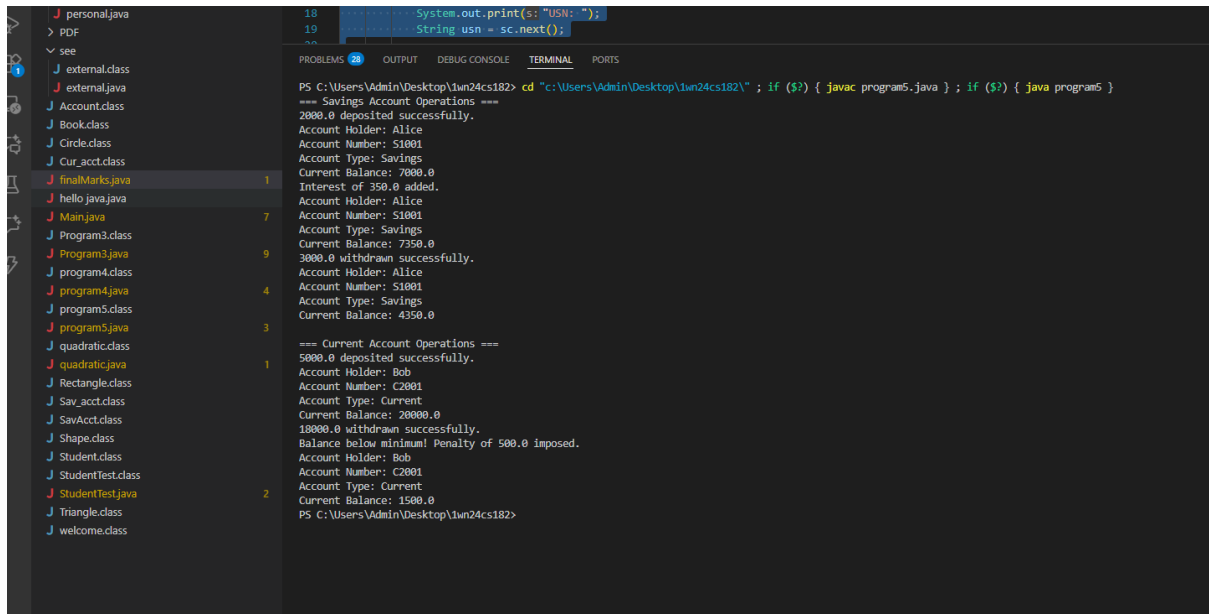
    sc.close();

}

}

```

OUTPUT:



The screenshot shows an IDE with a project explorer on the left, a code editor in the center, and a terminal at the bottom. The project explorer lists various Java files, including `personal.java`, `external.class`, `Account.class`, `Book.class`, `Circle.class`, `Cur_acct.class`, `finalMarks.java`, `hello.java.java`, `Main.java`, `Program3.class`, `Program3.java`, `Program4.class`, `Program4.java`, `Program5.class`, `Program5.java`, `quadratic.class`, `quadratic.java`, `Rectangle.class`, `Sav_acct.class`, `SavAcct.class`, `Shape.class`, `Student.class`, `StudentTest.class`, `StudentTest.java`, `Triangle.class`, and `welcome.class`. The code editor shows a snippet of Java code with line numbers 18 and 19. The terminal displays the output of the program, showing account operations for Alice and Bob.

```
18 System.out.print(s: "USN: ");
19 String usn = sc.next();

PS C:\Users\Admin\Desktop\1wn24cs182> cd "c:\Users\Admin\Desktop\1wn24cs182\" ; if ($?) { javac program5.java } ; if ($?) { java program5 }

=== Savings Account Operations ===
2000.0 deposited successfully.
Account Holder: Alice
Account Number: S1001
Account Type: Savings
Current Balance: 7000.0
Interest of 350.0 added.
Account Holder: Alice
Account Number: S1001
Account Type: Savings
Current Balance: 7350.0
3000.0 withdrawn successfully.
Account Holder: Alice
Account Number: S1001
Account Type: Savings
Current Balance: 4350.0

=== Current Account Operations ===
5000.0 deposited successfully.
Account Holder: Bob
Account Number: C2001
Account Type: Current
Current Balance: 20000.0
10000.0 withdrawn successfully.
Balance below minimum! Penalty of 500.0 imposed.
Account Holder: Bob
Account Number: C2001
Account Type: Current
Current Balance: 1500.0
PS C:\Users\Admin\Desktop\1wn24cs182>
```