

2. Develop a Java program to create a class Student with members usn, name, an array credits and an array marks. Include methods to accept and display details and a method to calculate SGPA of a student.

```
import java.util.Scanner;
class Student {
    String name;
    String usn;
    int marks[] = new int[3];
    int credit[] = new int[3];
    int totcredits()
    {
        int t = 0;
        for (i = 0; i < 3; i++)
        {
            t = t + credit[i];
        }
        return t;
    }
}
class CS044 {
    public static void main (String args[])
    {
        S.o.p ("enter the student name, usn\n");
        int i; t;
        float sgpa = 0;
        Scanner sc = new Scanner (System.in);
        Student st = new Student();
        st.name = sc.nextLine();
        st.usn = sc.nextLine();
        S.o.p ("marks and credit of each subjects are\n");
        for (i = 0; i < 3; i++)
        {
            st.marks[i] = sc.nextInt();
            if (st.marks[i] >= 100)
                st.marks[i] = (st.marks[i] / 10);
            else
                st.marks[i] = (st.marks[i] / 10) + 1;
            st.credit[i] = sc.nextInt();
            sgpa = sgpa + st.marks[i] * st.credit[i];
        }
        t = st.totcredits();
        sgpa = sgpa / t;
        S.o.p ("Sgpa of " + st.name + " is\n" + sgpa);
    }
}
```

Program 2

output

```
C:\Users\Chinmay Hegde\Documents\java practise>javac sgpa.java
```

```
C:\Users\Chinmay Hegde\Documents\java practise>java Sgpa
enter the student name, usn
```

```
Chinmay hegde
```

```
1BM21CS044
```

```
marks and credit of each subjects are
```

```
86 3
```

```
98 3
```

```
63 4
```

```
sgpa of Chinmay hegde is
```

```
8.5
```

8) Create a class Book which contains four members: name, author, price, num-pages. Include a constructor to set the values for the members. Include methods to set and get the details of the objects. Include a toString() method that could display the complete details of the book. Develop a Java program to create n book objects.

```
import java.util.Scanner;
class Book {
    String name;
    String author;
    int price;
    int pages;
    Book(String n, String a, int pr, int p) {
        name = n;
        author = a;
        price = pr;
        pages = p;
    }
    void get() {
        S.o.p("book details are\n name:" + name + "\n author:"
            + author + "\n price:" + price + "\n number of pages:"
            + pages + "\n");
    }
    public String toString() {
        return ("book details are\n name:" + name + "\n author:"
            + author + "\n price:" + price + "\n number of pages:"
            + pages + "\n");
    }
}
class Week4 {
    psum(String args[]) {
        int z, pr, p;
        String n, a;
        S.o.p("\n enter the number of books\n");
        Scanner sc = new Scanner(System.in);
        z = sc.nextInt();
```

Program 3

```
int i;
Book b[] = new Book[z];
for (i = 0; i < z; i++) {
    S.o.p("enter the name, author, price and pages of the
        book" + (i + 1) + " respectively\n");

    n = sc.next();
    a = sc.next();
    pr = sc.nextInt();
    p = sc.nextInt();
    b[i] = new Book(n, a, pr, p);
}
for (i = 0; i < z; i++) {
    S.o.p(b[i].toString());
}
```

3) Output

```
enter the number of books
```

```
2
```

```
enter the name ,author ,price and pages of the book1 respectively
```

```
lostworld
```

```
harry
```

```
150
```

```
200
```

```
enter the name ,author ,price and pages of the book2 respectively
```

```
spy
```

```
stokes
```

```
300
```

```
650
```

```
book details are
```

```
name: lostworld
```

```
author: harry
```

```
price:150
```

```
number of pages: 200
```

```
book details are
```

```
name: spy
```

```
author: stokes
```

```
price:300
```

```
number of pages: 650
```