

LRB-2

- 1) Write a Java program to create a class student with members USN, name and Marks (6 sub). Include methods to accept student details and marks. Also Include a method to calculate the percentage and display appropriate details.

⇒

```
import java.util.Scanner;
```

```
class Student {
```

```
    String USN;
```

```
    String name;
```

```
    double[] marks = new double[6];
```

```
    void inputDetails () {
```

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

```
        System.out.println("Enter USN:");
```

```
        USN = scanner.next();
```

```
        System.out.println("Enter Name:");
```

```
        name = scanner.next();
```

```
        System.out.println("Enter marks for  
        6 subjects:");
```

```
        for (int i=0; i<6; i++) {
```

```
            System.out.println("Subject " +  
            (i+1) + ":");
```

```
            marks[i] = scanner.nextDouble();
```

```
        }
```

```
    }
```

```
double calculatePercentage() {  
    double totalMarks = 0;  
    for (double mark : marks) {  
        totalMarks += mark;  
    }  
    return (totalMarks / 6);  
}
```

```
void displayDetails() {  
    System.out.println("\n Student Details :");  
  
    System.out.println("USN : " + USN);  
    System.out.println("Name : " + name);  
  
    System.out.println("Marks :");  
  
    for (int i = 0; i < 6; i++) {  
        System.out.println("Subject " +  
            (i + 1) + " : " + marks[i]);  
    }  
  
    System.out.println("Percentage : " +  
        calculatePercentage() + "%");  
}
```



```
class Main {  
    public static void main (String[] args) {  
  
        Scanner scanner = new Scanner (System.in);  
  
        System.out.print ("Enter the number of  
        students:");  
  
        int numberOfStudents = scanner.nextInt();  
  
        Student[] students = new Student [numberOf  
        students];  
  
        for (int i=0; i < numberOfStudent; i++) {  
            students[i] = new Student();  
            System.out.println ("Enter detail  
            for student " + (i+1) + ":");  
  
            students[i].inputDetails();  
        }  
  
        for (int i=0; i < numberOfStudents; i++) {  
            students[i].displayDetails();  
        }  
    }  
}
```

Enter no of students : 1.

Student 1

Enter USN : IBM22CS296

Enter Name : Sumit

Enter mark for 6 Subject:

Subject 1 : 98

Subject 2 : 97

Subject 3 : 93

Subject 4 : 92

Subject 5 : 99

Subject 6 : 91

Student Details

USN : IBM22CS296

Name : Sumit

Marks:

Subject 1 : 98

Subject 2 : 97

Subject 3 : 93

Subject 4 : 92

Subject 5 : 99

Subject 6 : 91

Percentage : 95%

2. Create a class Book that contains four members: name, author, price, and num_page. Include a constructor to set the values for the members. Include methods to set and get the details of the object. 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 numPages;
```

```
    Book (String name, String author, int price,
          int numPages) {
```

```
        this.name = name;
```

```
        this.author = author;
```

```
        this.price = price;
```

```
        this.numPages = numPages;
```

```
    }
```

```
    public String toString() {
```

```
        String name, author, price, numPages;
```

```
        name = "Book name: " + this.name + "\n";
```

```
        author = "Author name: " + this.author + "\n";
```

```
        price = "price " + this.price + "\n";
```

```
        numPages = "number of pages" + this.numPages
                    + "\n";
```

```
        return name + author + price + numPages;  
    }  
}
```

```
class main {
```

```
    public static void main(String args[]) {  
        Scanner s = new Scanner(System.in);  
        int n;  
        String name, author;  
        int price, numPages;
```

```
        System.out.println("Enter no of books");  
        n = s.nextInt();  
        Book b[];
```

```
        b = new Book[n];
```

```
        for (int i=0; i<n; i++) {  
            String.out.println("book" + (i+1))
```

```
            System.out.println("Enter name of  
            the book :");  
            name = s.next();
```

```
            System.out.println("Enter author");  
            author = s.author s.nextInt();
```

```
            System.out.println("No of  
            pages :");  
            numPages = s.nextInt();
```

```
            b[i] = new Book(name, author,  
            price, numPages);
```

```
    }
```



```
for (int i=0; i<n; i++)  
    System.out.println ("book" + (i+1) + " " +  
        b[i]);  
  
}
```

Output :

Enter no of books

1

book 1

enter name of the book: abc

enter author : Sumit

enter price : 1000

enter no of page : 200

Book 1

book name = abc

book author = Sumit

book price : 1000

No of Page : 200

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