
OOPM - PRACTICAL EXAM.

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AIM: Write a JAVA program for class Student, accept the name, roll no., marks of three subjects, calculate total, and display the complete information.

Program:

Main.java

```java
package com.sarang;

import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Student s1 = new Student();

        Scanner sc = new Scanner(System.in); //Creating an object sc to take input from the user.

        System.out.print("Enter your name : ");
        String a = sc.nextLine();
        System.out.print("Enter your Roll No. : ");
        int b = sc.nextInt();
        System.out.print("Enter marks obtained in three subjects : ");
        int a1 = sc.nextInt();
        int a2 = sc.nextInt();
        int a3 = sc.nextInt();
        s1.InputInfo(a, b);
        s1.marks(a1, a2, a3);
        s1.total();
        s1.display();
    }
}
```

Student.java

```java
package com.sarang;

import java.util.Scanner;

class Student
{
    String name;
    int rollno;
    int subject1_marks;
    int subject2_marks;
    int subject3_marks;
    int total;

    void InputInfo(String n, int r)
    {
        name = n;
        rollno = r;
    }

    void marks(int m1,int m2,int m3)
    {
        subject1_marks = m1;
        subject2_marks = m2;
        subject3_marks = m3;
    }

    void total() { total = subject1_marks + subject2_marks + subject3_marks; }

    void display()
    {
        System.out.println("The information of the student is as follows:");
        System.out.println("Name : " + name);
        System.out.println("Roll No.: " + rollno);
        System.out.println("Marks in Subject 1: " + subject1_marks);
        System.out.println("Marks in Subject 2: " + subject2_marks);
        System.out.println("Marks in SUbject 3: " + subject3_marks);
        System.out.println("Total Marks : " + total + "/300");
    }
}
```

Theory:

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We have created a package called com.sarang in which we have created 2 different classes. A main in which our execution takes place and a class named Student in which we store the data of the Student & create its object.

In the student class, we have defined a String name and 5 integers rollno, marks1, mark2, mark3, and total to store the data of the Student object.

We have also defined 4 methods,

i) InputInfo - to initialize name & roll no,
ii) marks - to initialize marks of the Student,
iii) total - to calculate & store the total marks of the student
iv) display - which displays us, all the information of the student from name, roll no to the total.

In the main.java file, we first import the Scanner class from java.util and basic modules from java.lang.

Later, we create a public static void main method in our Main class through which the execution of our code starts.

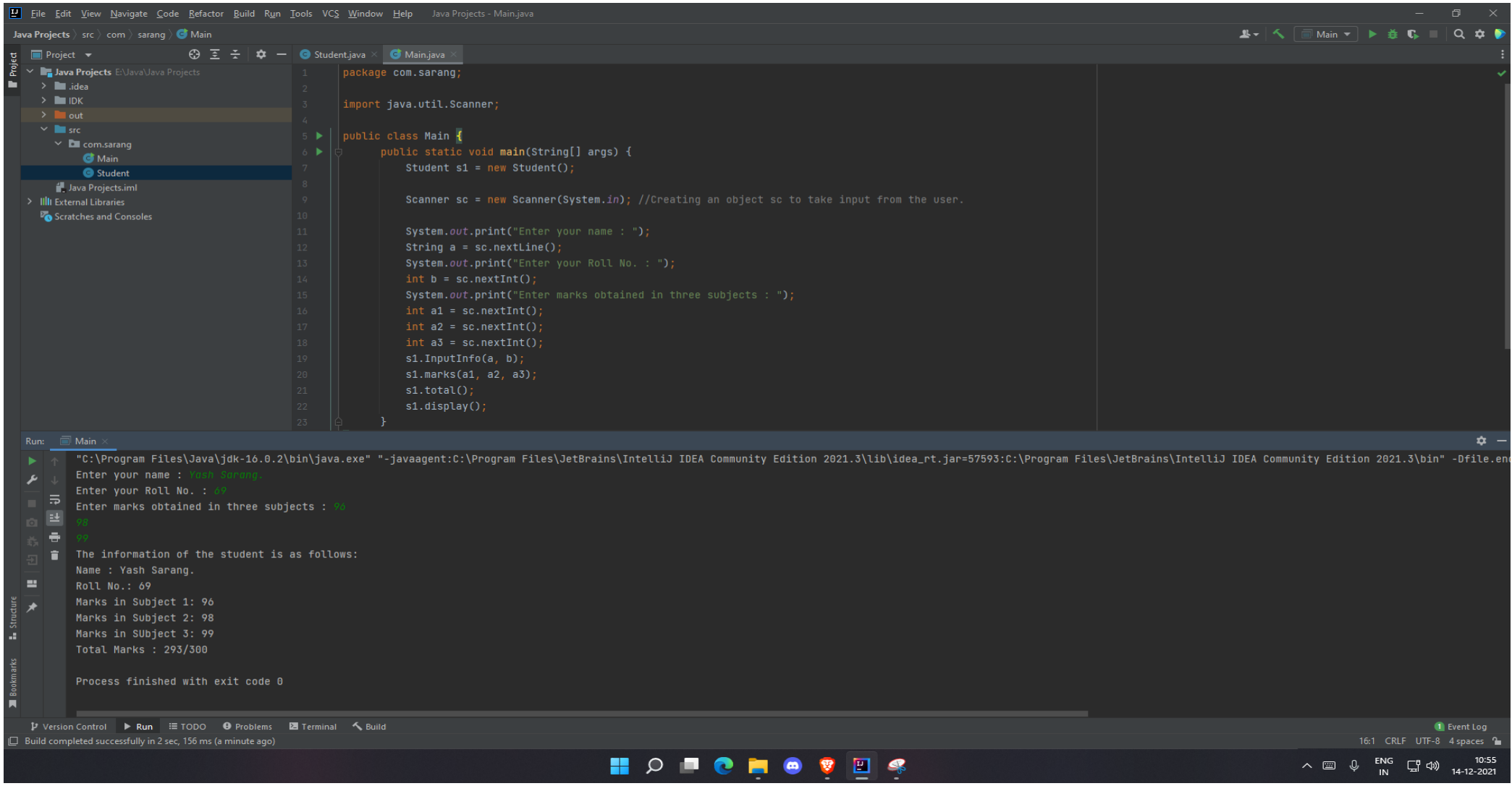
We first create a Scanner object named sc. and then create a new object of Student class named s1.

Using the nextLine, nextInt methods from the Scanner class we input the data of the Student.

At last, we call InputInfo, marks and total methods of our Student class to store and initialise the data of the student.

We can then, display the data of our student object through the command line through the display() method.

OUTPUT:


File Edit View Navigate Code Refactor Build Run Tools VCS Window Help Java Projects - Main.java
Java Projects src com sarang Main
Main
Project
Java Projects E:\Java\Java Projects
.idea
IDK
out
src
com.sarang
Main
Student
Java Projects.iml
External Libraries
Scratches and Consoles
Student.java
Main.java
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import java.util.Scanner;
public class Main {
public static void main(String[] args) {
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int a1 = sc.nextInt();
int a2 = sc.nextInt();
int a3 = sc.nextInt();
s1.InputInfo(a, b);
s1.marks(a1, a2, a3);
s1.total();
s1.display();
}
Run: Main
"C:\Program Files\Java\jdk-16.0.2\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3\lib\idea_rt.jar=57593:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3\bin" -Dfile.en
Enter your name : Yash Sarang.
Enter your Roll No. : 69
Enter marks obtained in three subjects : 96
98
99
The information of the student is as follows:
Name : Yash Sarang.
Roll No.: 69
Marks in Subject 1: 96
Marks in Subject 2: 98
Marks in SUbject 3: 99
Total Marks : 293/300
Process finished with exit code 0
Version Control Run TODO Problems Terminal Build
Event Log
Build completed successfully in 2 sec, 156 ms (a minute ago)
16:1 CRLF UTF-8 4 spaces
ENG IN
10:55 14-12-2021

```
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Process finished with exit code 0
```
