

Job No:- 01

Job Name:- Java programs using class, object, method and constructor.

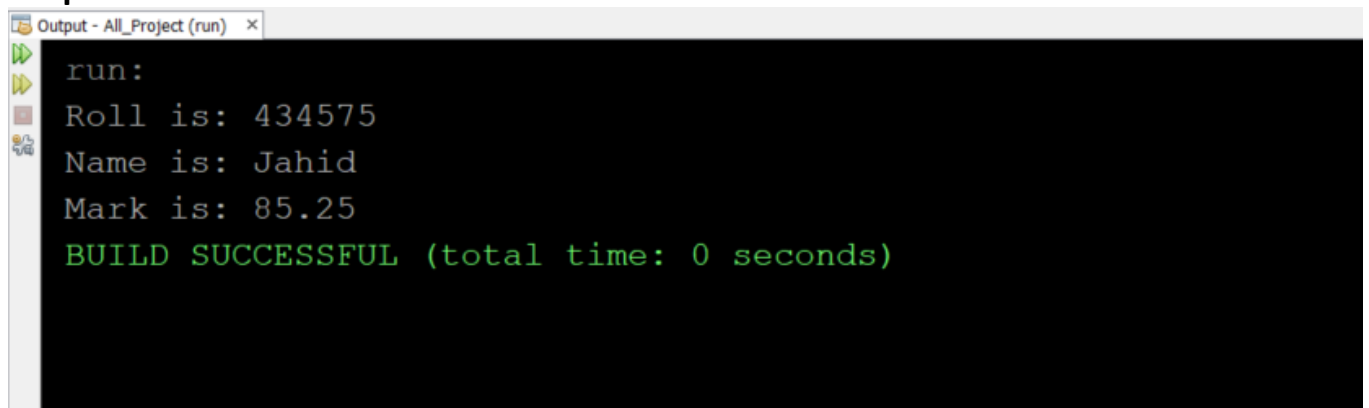
Objectives:- Java program-এ ক্লাস, অবজেক্ট, মেথড এবং কনস্ট্রাক্টর এর বাস্তব ব্যবহার প্রয়োগ করা।

Theory:- NetBeans Open করে নিচের প্রোগ্রামগুলো লিখে execute করতে হবে এবং আউটপুট দেখাতে হবে।

প্রোগ্রাম-১:- Class ও object ব্যবহার করে প্রোগ্রামঃ

```
package all_project.Collage;
public class Student {
    private int Roll;
    private String Name;
    private float Mark;
    private void GetData(){
        Roll = 434575;
        Name = "Jahid";
        Mark = 85.25f;
    }
    void Display(){
        GetData();
        System.out.println("Roll is: "+Roll);
        System.out.println("Name is: "+Name);
        System.out.println("Mark is: "+Mark);
    }
    public static void main(String[] args) {
        Student s = new Student(); //Object declare
        s.Display();
    }
}
```

Output:-

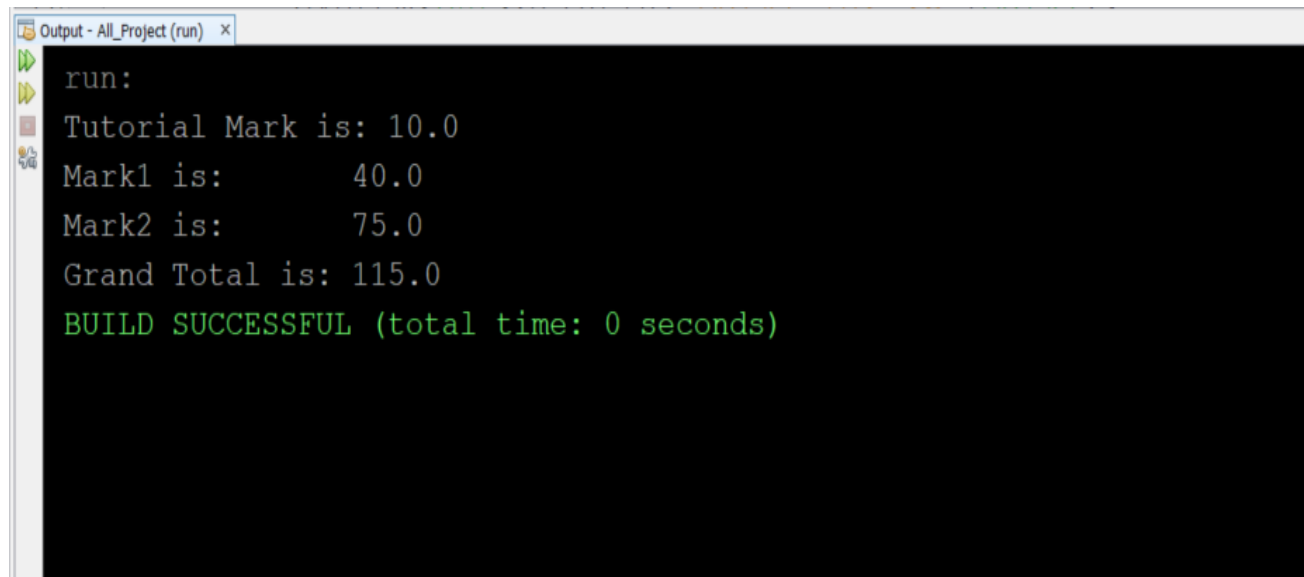


```
Output - All_Project (run) x
run:
Roll is: 434575
Name is: Jahid
Mark is: 85.25
BUILD SUCCESSFUL (total time: 0 seconds)
```

প্রোগ্রাম-২:- মেথড ব্যবহার করে Java program:

```
package all_project.Collage;
public class Student {
    float Mark1, Mark2, Tutorial;
    float Total, GTotal;
    float GetMark(float M1, float M2){
        Mark1 = M1;
        Mark2 = M2;
        Total = Mark1 + Mark2;
        return(Total);
    }
    void Display(){
        Tutorial = 10;
        GTotal = Total + GetMark(40,75);
        System.out.println("Tutorial Mark is: "+Tutorial);
        System.out.println("Mark1 is: \t"+Mark1);
        System.out.println("Mark2 is: \t"+Mark2);
        System.out.println("Grand Total is: "+GTotal);
    }
    public static void main(String[] args) {
        Student s = new Student();
        s.Display();
    }
}
```

Output:-

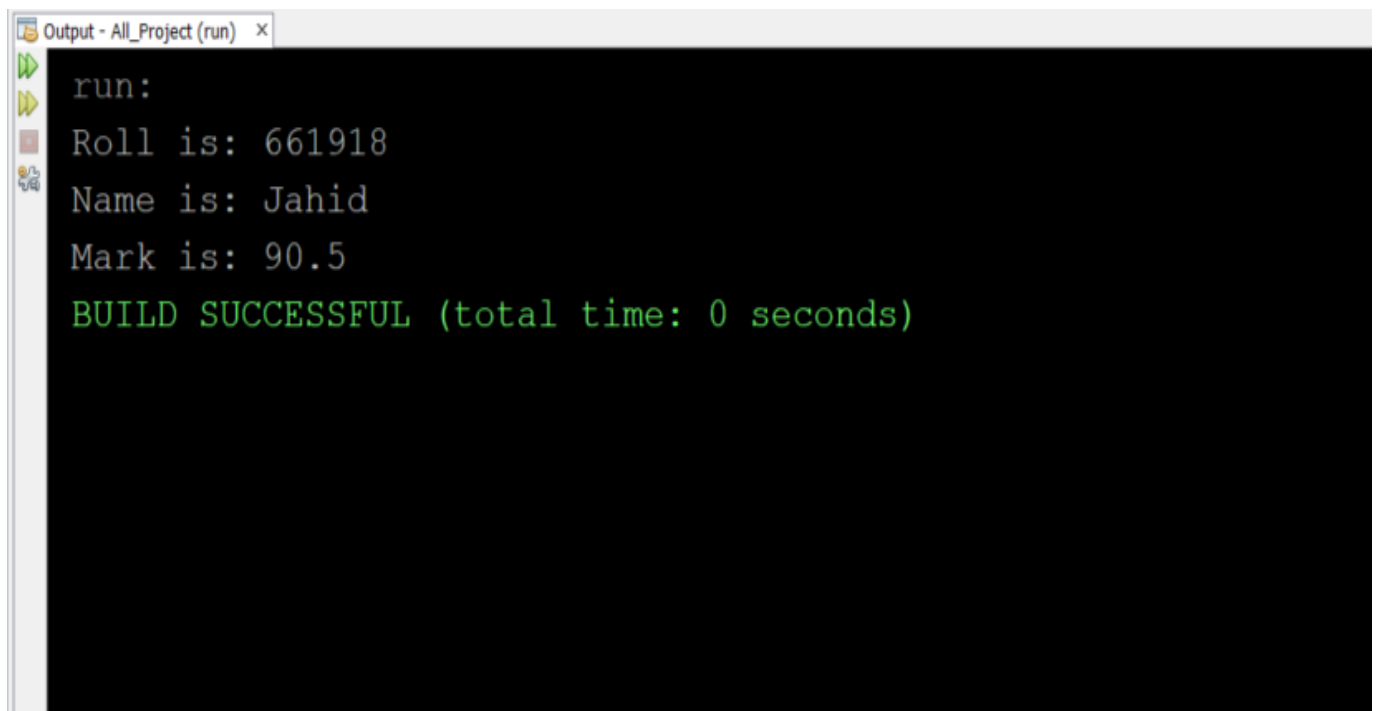
A screenshot of a Java IDE's output window. The window title is "Output - All_Project (run)". The output text is as follows:

```
run:
Tutorial Mark is: 10.0
Mark1 is:         40.0
Mark2 is:         75.0
Grand Total is: 115.0
BUILD SUCCESSFUL (total time: 0 seconds)
```

প্রোগ্রাম-৩:- Constructor ব্যবহার করে Java program:

```
package all_project.Collage;
public class Student {
    int Roll;
    String Name;
    float Mark;
    public Student(){
        Roll = 661918;
        Name = "Jahid";
        Mark = 90.50f;
    }
    void Display(){
        System.out.println("Roll is: "+Roll);
        System.out.println("Name is: "+Name);
        System.out.println("Mark is: "+Mark);
    }
    public static void main(String[] args) {
        Student s = new Student(); //Object declare
        s.Display();
    }
}
```

Output:-

A screenshot of a Java IDE's output window. The window title is "Output - All_Project (run)". On the left side, there are three icons: a green play button, a yellow play button, and a red square. The output text is as follows:

```
run:
Roll is: 661918
Name is: Jahid
Mark is: 90.5
BUILD SUCCESSFUL (total time: 0 seconds)
```

Job No:- 02

Job Name:- Java programs using inheritance and polymorphism.

Objectives:-

--Inheritance ও Polymorphism ব্যবহার করে জাভাতে প্রোগ্রাম লেখা ও Run করা।

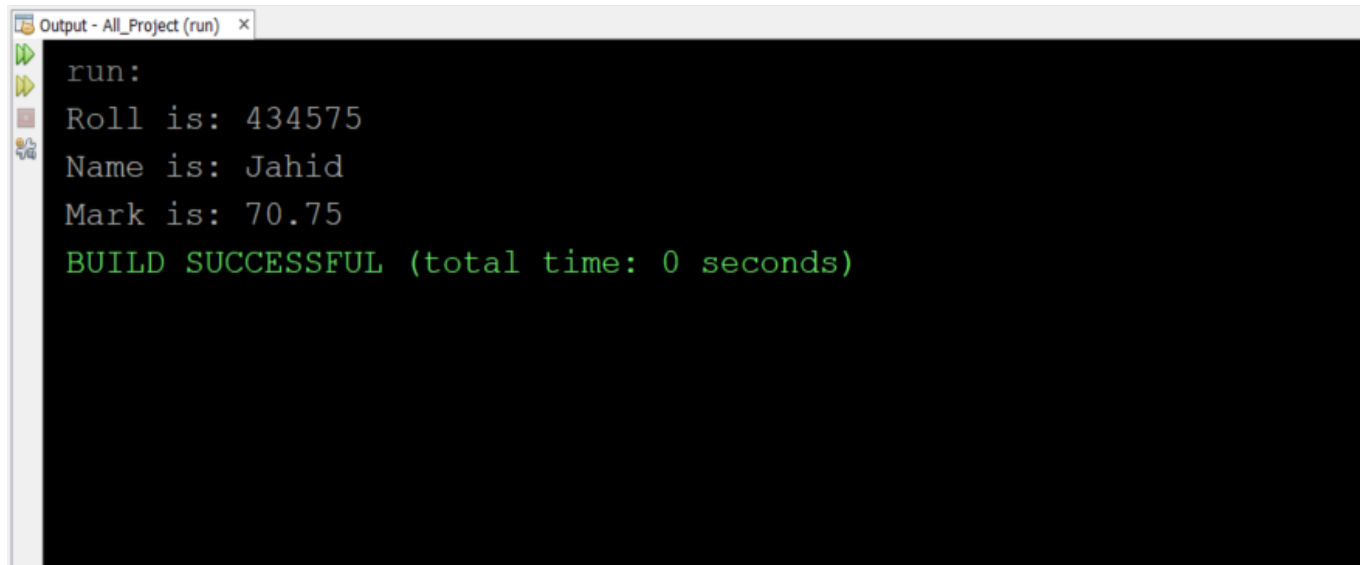
Theory:-

--NetBeans Open করতে হবে এবং নিম্নোক্ত প্রোগ্রামগুলো লিখতে হবে ও আউটপুট ডিসপ্লেতে দেখাতে হবে।

প্রোগ্রাম-১:- Inheritance ব্যবহার করে জাভা প্রোগ্রামঃ

```
package all_project.Collage;
class Student2{
    int Roll;
    String Name = new String();
}
class Result extends Student2{
    float Mark;
    void GetData(){
        Roll = 434575;
        Name = "Jahid";
        Mark = 70.75f;
    }
    void Display(){
        System.out.println("Roll is: "+Roll);
        System.out.println("Name is: "+Name);
        System.out.println("Mark is: "+Mark);
    }
}
public class Inheritance {
    public static void main(String[] args) {
        Result R = new Result();
        R.GetData();
        R.Display();
    }
}
//Program the End.
```

Output:-

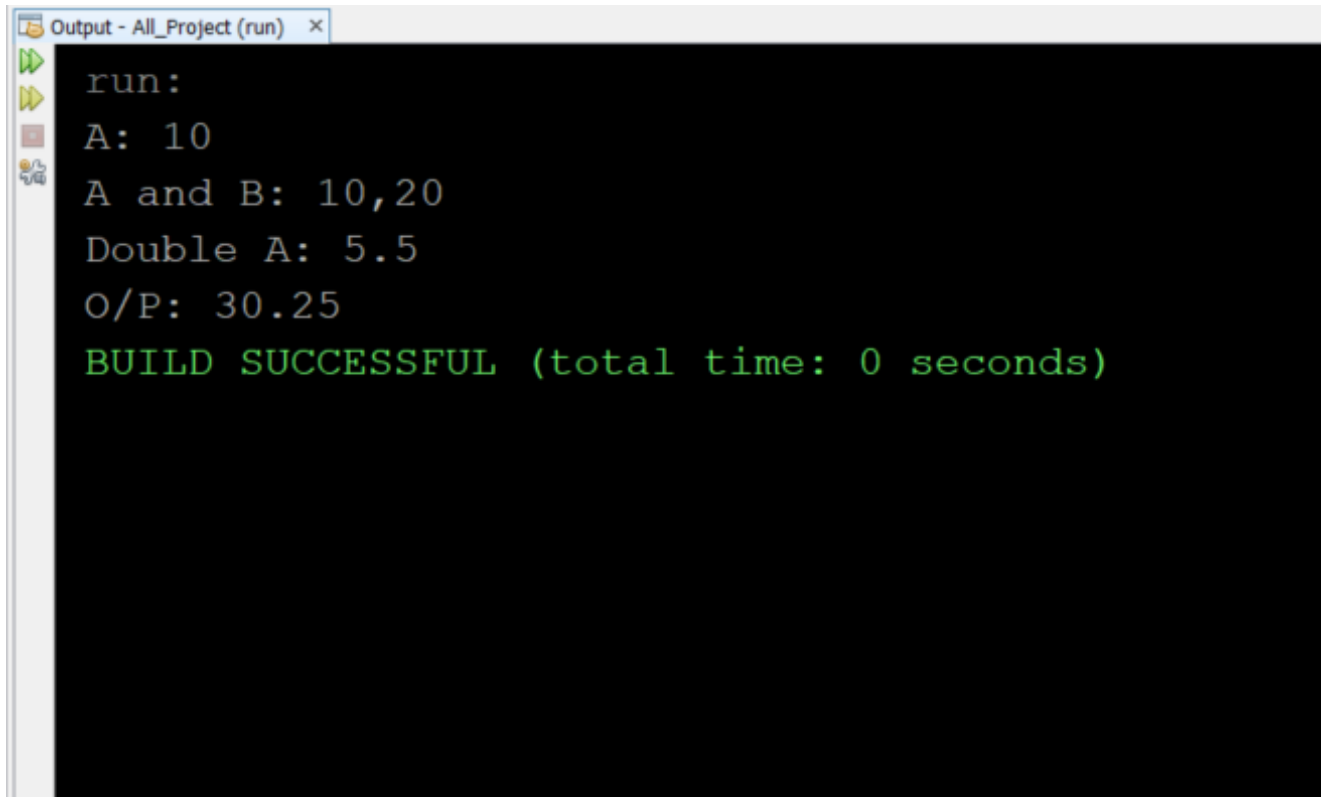


```
Output - All_Project (run) x
run:
Roll is: 434575
Name is: Jahid
Mark is: 70.75
BUILD SUCCESSFUL (total time: 0 seconds)
```

প্রোগ্রাম-২:- Polymorphism ব্যবহার করে জাভা প্রোগ্রামঃ

```
package all_project.Collage;
public class Polymorphism {
    void demo (int a){
        System.out.println("A: "+a);
    }
    void demo (int a, int b){
        System.out.println("A and B: "+a+ ", "+b);
    }
    double demo(double a){
        System.out.println("Double A: "+a);
        return a*a;
    }
    public static void main(String[] args) {
        Polymorphism obj = new Polymorphism();
        double result;
        obj.demo(10);
        obj.demo(10, 20);
        result = obj.demo(5.5);
        System.out.println("O/P: "+result);
    }
}
```

Output:-



The image shows a screenshot of an IDE's output window. The window has a title bar that reads "Output - All_Project (run)" with a close button. On the left side of the window, there is a vertical toolbar with four icons: a green play button, a yellow play button, a red stop button, and a magnifying glass. The main area of the window is black and contains the following text in a monospaced font:

```
run:
A: 10
A and B: 10,20
Double A: 5.5
O/P: 30.25
BUILD SUCCESSFUL (total time: 0 seconds)
```

Job No:- 03

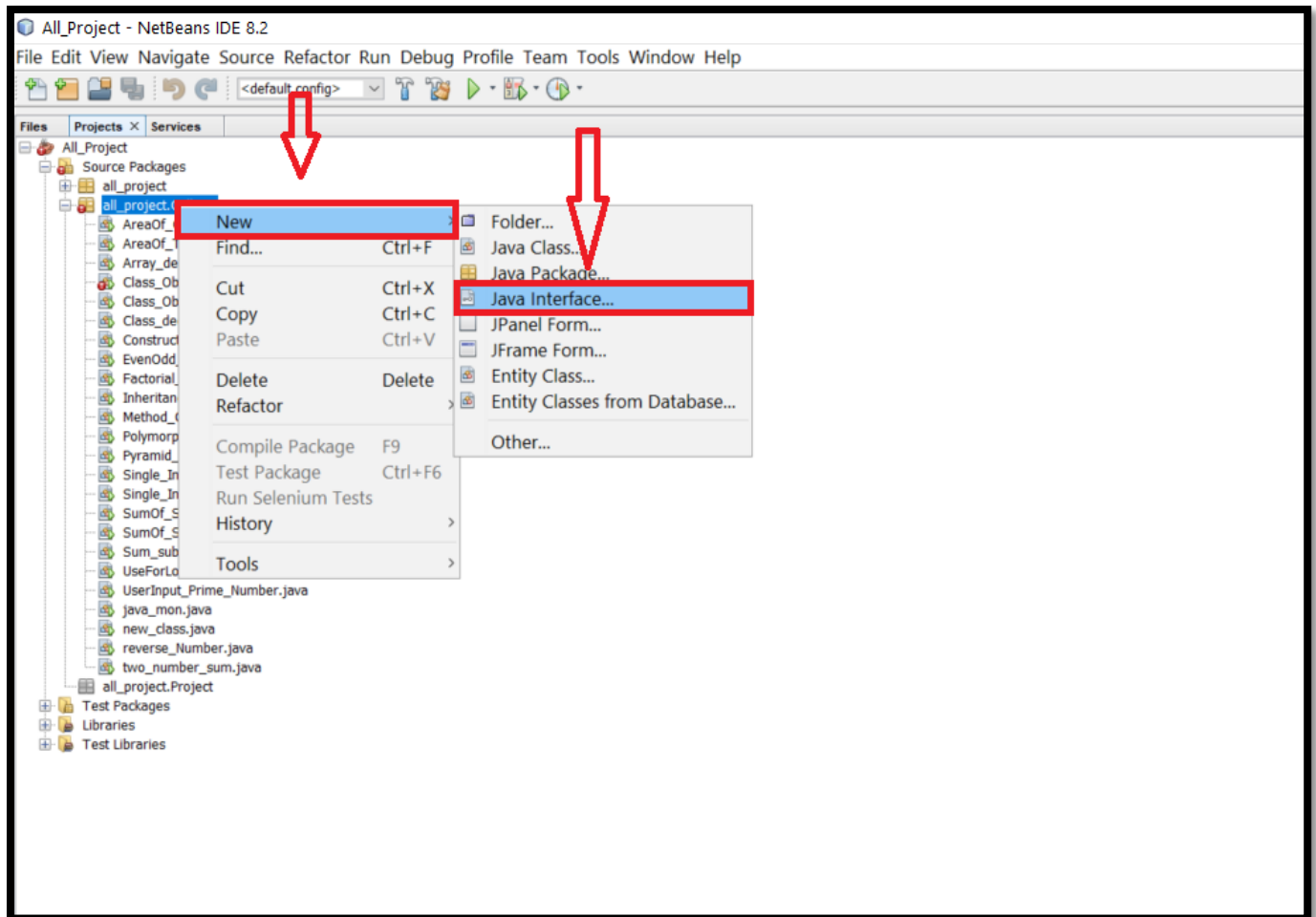
Job Name:- Write and execute java program using interface.

Objectives:-

-- NetBeans সফটওয়্যার ব্যবহার করে Interface সম্পর্কিত প্রোগ্রাম লেখা ও execute করা।

Theory:-

--নিচে Interface রিলেটেড একটি প্রোগ্রাম ও এর আউটপুট দেখানো হলোঃ

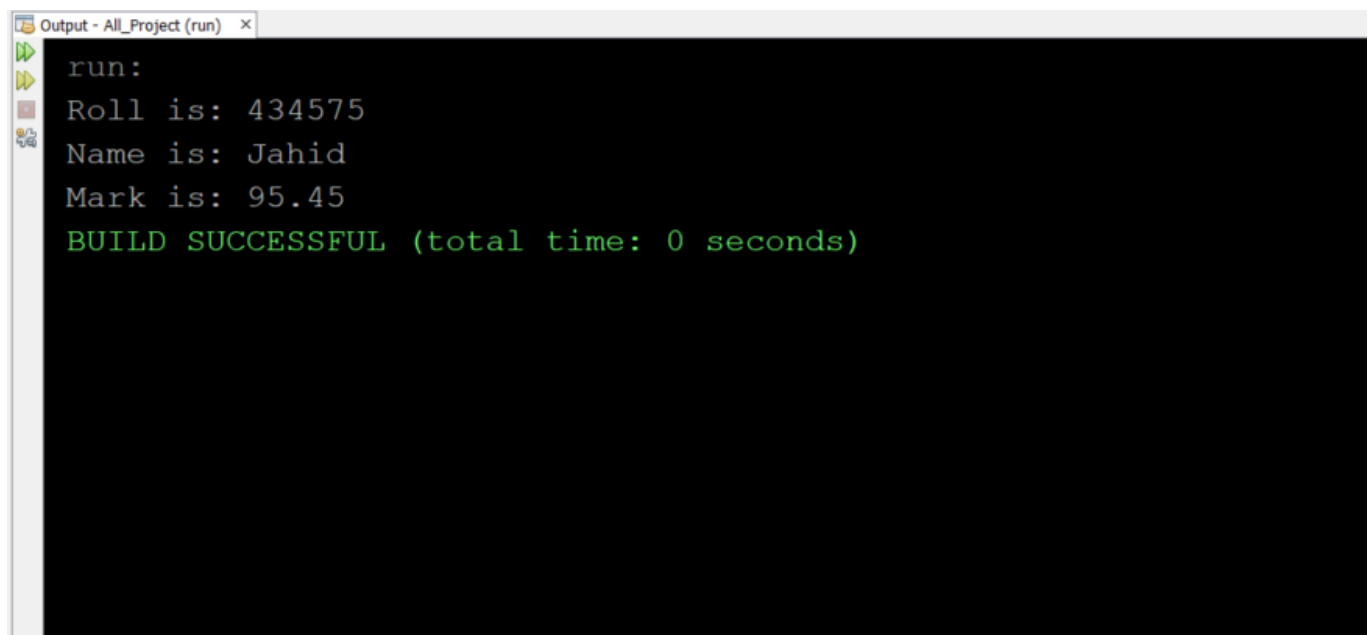


Program:-

```
package all_project.Collage;  
interface Student_  
{  
    static final int Roll = 434575;  
    static final String Name = "Jahid";  
    void Display();  
}  
class Result_ implements Student_
```

```
public float Mark;
@Override
public void Display(){
    System.out.println("Roll is: "+Roll);
    System.out.println("Name is: "+Name);
}
public void GetMark(){
    Mark = 95.45f;
}
public void ShowMark(){
    System.out.println("Mark is: "+Mark);
}
}
public class Execute_Interface {
    public static void main(String[] args) {
        Result_ R = new Result_();
        R.Display();
        R.GetMark();
        R.ShowMark();
    }
}
```

Output:-

The image shows a screenshot of an IDE's output window. The window has a title bar that reads "Output - All_Project (run)". On the left side of the window, there are four small icons: a green play button, a yellow play button, a red square, and a magnifying glass. The main area of the window is black with white and green text. The text displayed is: "run:", "Roll is: 434575", "Name is: Jahid", "Mark is: 95.45", and "BUILD SUCCESSFUL (total time: 0 seconds)".

```
run:
Roll is: 434575
Name is: Jahid
Mark is: 95.45
BUILD SUCCESSFUL (total time: 0 seconds)
```