**Heaven’s Light is Our Guide**



**Rajshahi University of Engineering and Technology**

**Department of Computer Science and Engineering**

**Course No:** CSE.1204

**Course Title:** Sessional based on CSE.1203 (Object Oriented Programming)

**Lab Report No:** 08

**Lab Report On:** Inheritance in Java.

**Submitted By** **Submitted To**

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Department: CSE

**Problem No:** 01

**Problem Statement:** Implementation of **Inheritance** in the following classes in Java.

**class** person **class** student

|  |
| --- |
| private:  string roll;  float cgpa; |
| void show ( ); |

|  |
| --- |
| private:  string name;  string mobile\_no; |
| void show ( ); |

Extend

**Theory**

In Java when we write a code the code must be in a **package** named as the java file name. The syntax of package is **package java\_file\_name ;**

The syntax of class in java is given below:

**class class\_name**

**{**

**// Body of class**

**}**

The capability of a class to derive properties and characteristics from another class is called **Inheritance**. Inheritance is one of the most important feature of Object Oriented Programming. In inheritance there are two types of classes:

**1. Sub Class:** The class that inherits properties from another class is called Sub class or Derived Class.

**2. Super Class:** The class whose properties are inherited by sub class is called Base Class or Super class.

The syntax for creating a sub-class inherited from a base-class **in Java** is given below:

**class subclass\_name extends base\_class\_name**

**{**

**//body of subclass**

**}**

While overriding a function or to pass arguments in super class from sub class in Java we just have to use a keyword **super.**

To pass arguments:  **super ( arguments );**

To override a function: **super.function\_name ();**

In Java functions are by default **private**. The **main** function in Java must be in a public class named as the java file name. The syntax is given below:

**public class java\_file\_name {**

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

**// Body of main function**

**}**

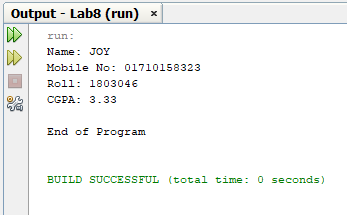
**}**

**Source Code**

1. **File\_name.java :**

|  |
| --- |
| package Lab8;  class person {  private String name;  private String mobile\_no;  public person ()  {  name=null;  mobile\_no=null;  }  public person (String name,String mobile\_no)  {  this.name = name;  this.mobile\_no = mobile\_no;  }  public void show ()  {  System.out.println("Name: "+ name + "\nMobile No: " + mobile\_no);  }  }  class student extends person {  private String roll;  private double cgpa;  public student ()  {  super ();  roll = null;  cgpa = 0;  }  public student (String name,String mobile\_no,String roll,double cgpa)  {  super (name,mobile\_no);  this.roll = roll;  this.cgpa = cgpa;  }  public void show ()  {  super.show ();  System.out.println("Roll: "+ roll + "\nCGPA: " + cgpa);  }  }  public class Lab8 {  public static void main (String[] args) {  int a;  student ob = new student("JOY","01710158323","1803046",3.33);  ob.show();  System.out.println("\nEnd of Program\n\n");    }  } |

**Output**

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**Conclusion :** By our Course Teachers help and my knowledge about Java, I completed the program.But still **I have some problem** working with **float type data**.

**# The End #**