**23CSE111**

**OBJECT ORIENTED PROGRAMMING**

**LAB REPORT**



**Department of Computer Science Engineering**

**Amrita School of Computing**

**Amrita Vishwa Vidyapeetham, Amaravati Campus**

**Name:M.PRANAVI**

**Verified By Roll No: 24302**

**WEEK 01**

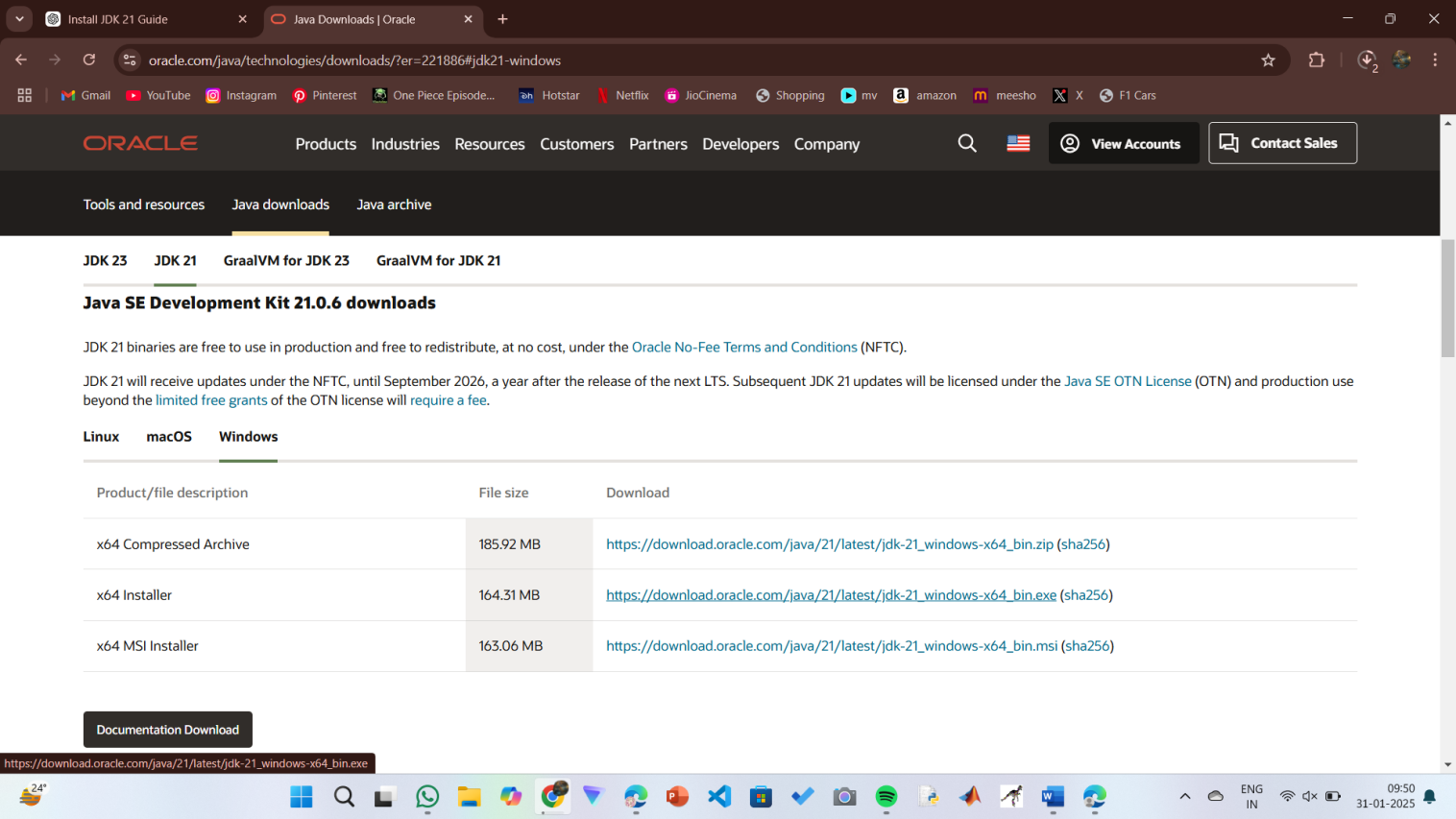
**PROGRAM-1:**

**AIM:** Download and Install Java Software

**PROCEDURE:**

**Step 1: Download JDK 21**

1. Open your web browser and go to the Oracle JDK Downloads page
2. Scroll down to the Java SE Development Kit 21 section.
3. Choose the Windows x64 Installer version.
4. Click on Download, then Wait for the download to complete**.**



**Step 2:** **Install JDK 21**

1. Locate the downloaded jdk-21\_windows-x64\_bin.exe file.
2. Double-click to launch the installer.
3. Click Next on the setup wizard.
4. Choose the installation path (default is C:\Program Files\Java\jdk-21).
5. Click Next, then click Install.
6. Wait for the installation to complete.
7. Click Close once the installation is finished.



**Step 3: Setting up the path**

1) Go to “Windows C” Drive on Desktop

2) Choose Program Files, select Java, then JDK 21, then select Bin.

3) Select and copy the path at the address bar.



**Step 4: Open System Properties**

1. Press Windows + R, type sysdm.cpl , and click Ok-
2. The System Properties window will open.
3. Navigate to the Advanced tab.
4. Click on Environment Variables at the bottom.



**Step 5: Set JAVA\_HOME**

1)Under System Variables, click New.

2)Set the Variable name as JAVA\_HOME.

3)Set Variable value as C:\Program Files\Java\jdk-21 (or your installation path).

4)Click OK.



**Step 6: Update PATH Variable**

1)In System Variables, find Path and click Edit.

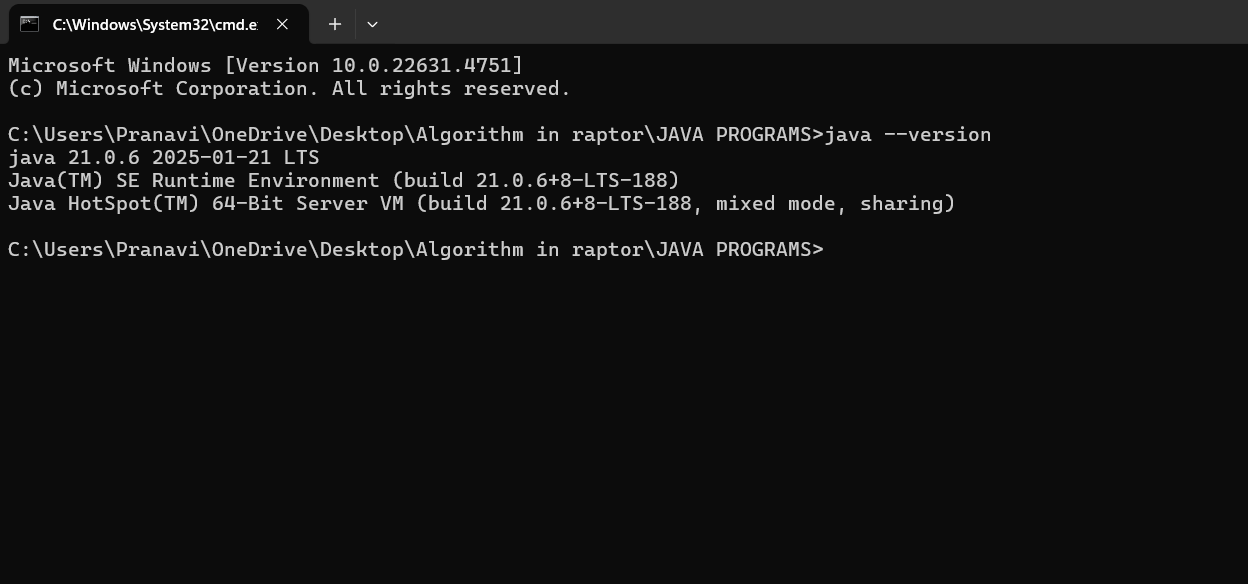
2)Click New and add: C:\Program Files\Java\jdk-21\bin

3)Click OK to save.



**Step 7:Verify Installation**

1. Open Command Prompt.
2. Type the following command: **java --version** and press Enter.



1. To check the java compiler type: **javac –version.**



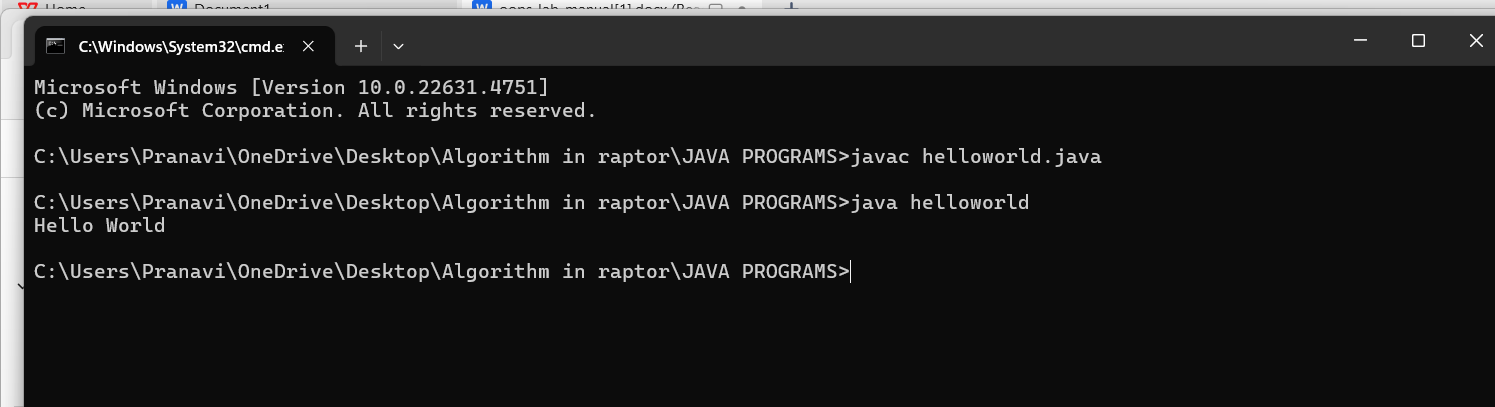
**PROGRAM-2:**

**AIM:** Write a Java program to print the message “Welcome to Java Programming.”

**CODE:**



**Output:**



**ERRORS:** None found

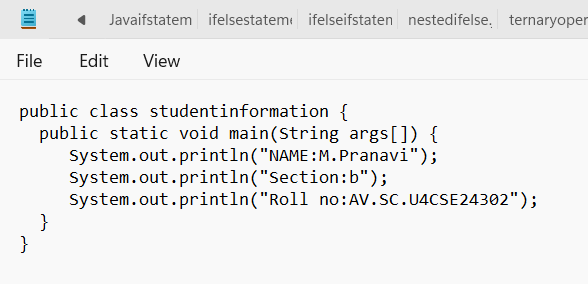
**WEEK 02**

**PROGRAM-3:**

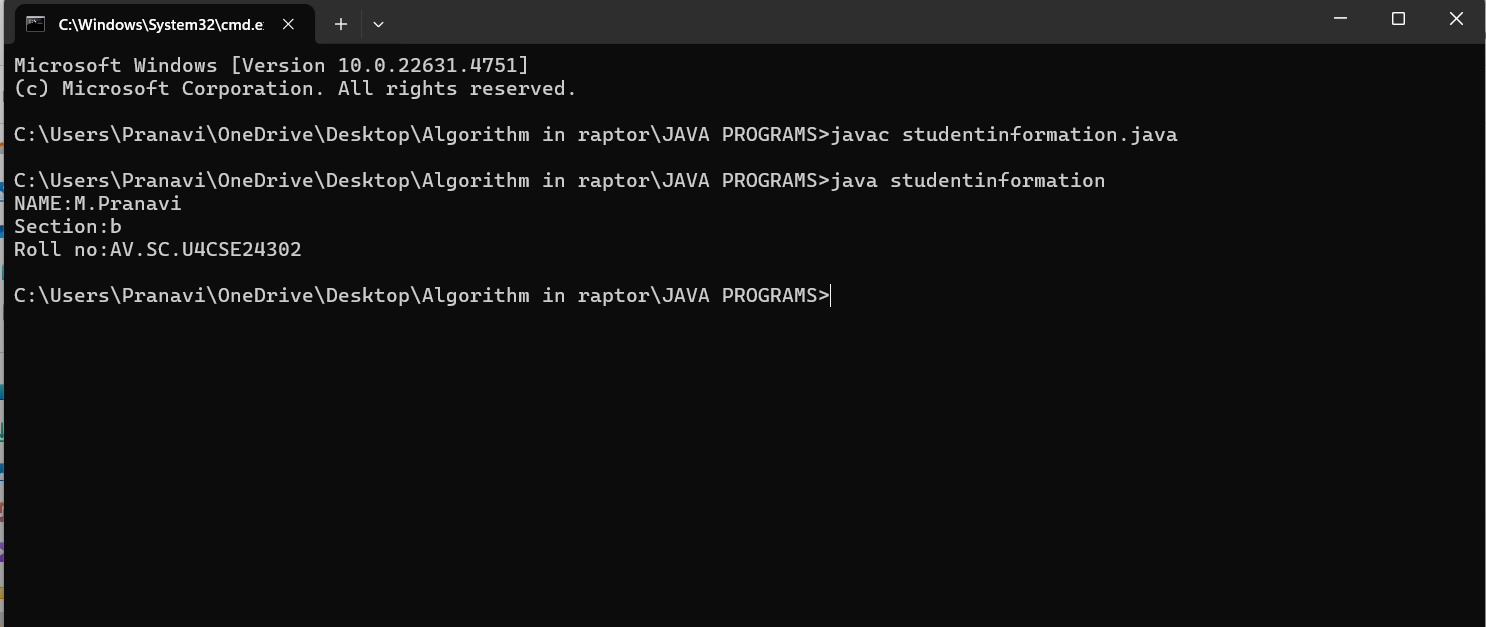
**AIM:** Write a Java Program that prints Name, Roll No, Section of a student.

**CODE:**

**STUDENT DETAILS:**



**OUTPUT:**



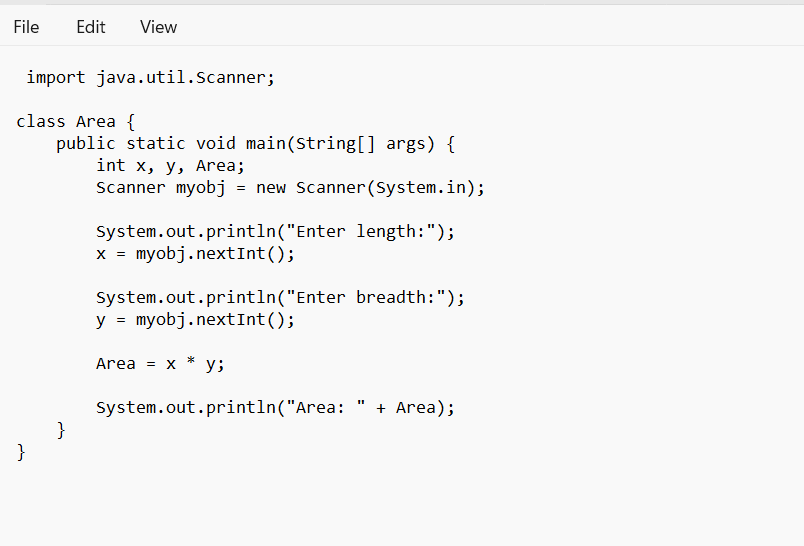
ERROR TABLE:

|  |  |
| --- | --- |
| **Code Error** | **Code rectification** |
| 1. writing small “S”in place of”S”   In system.out.println()  2)not giving strings to the name and section | 1. code is rectified by keeping capital “S” 2. Giving strings to name and section |

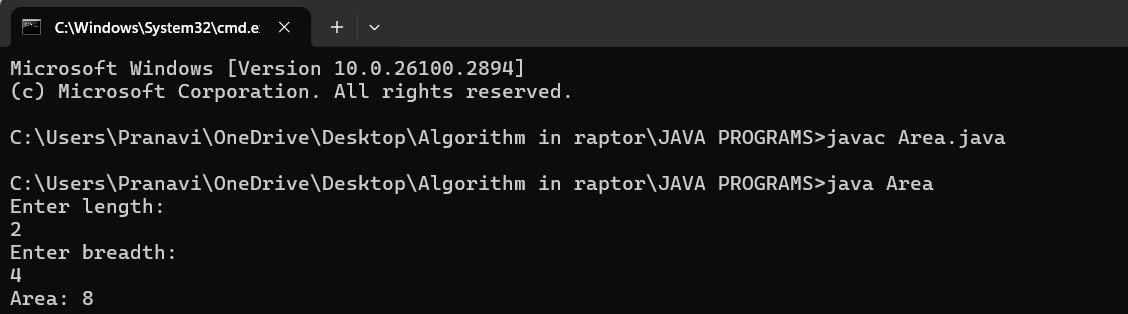
**PROGRAM-4:**

**AIM:** Calculate area of rectangle.

**CODE:**



**OUTPUT:**



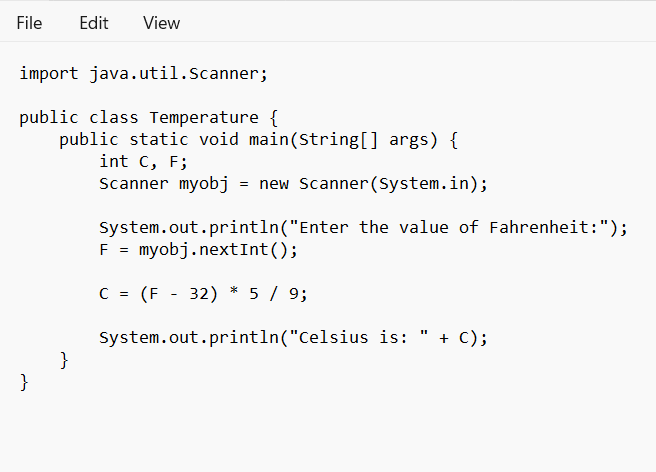
ERROR TABLE:

|  |  |
| --- | --- |
| **Code Error** | **Code rectification** |
| 1.writing small “S”in place of”S”  In system.out.println()  2.not giving strings to the name and section | 1.code is rectified by keeping capital “S”  2.Giving strings to name and section |

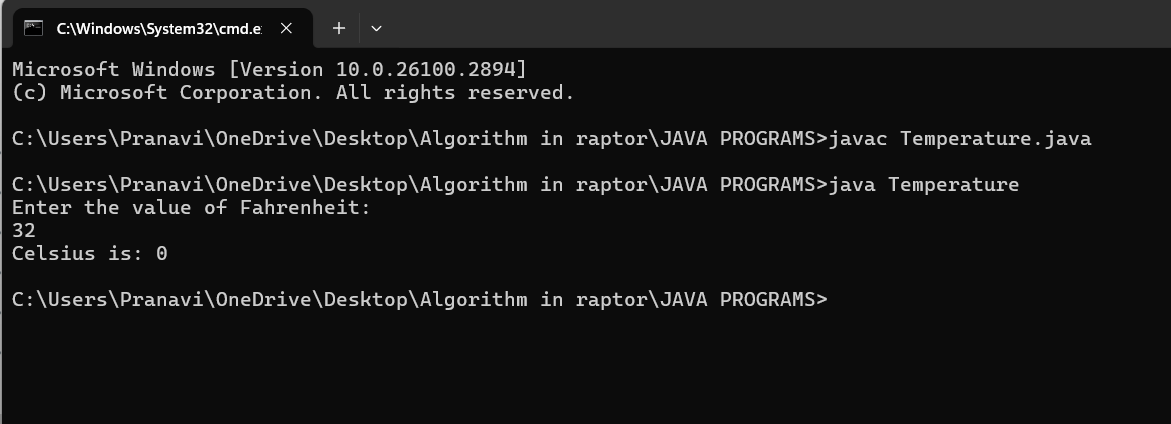
**PROGRAM-5:**

**AIM:**Convert temperature celsius into fahrenheit

**CODE:**



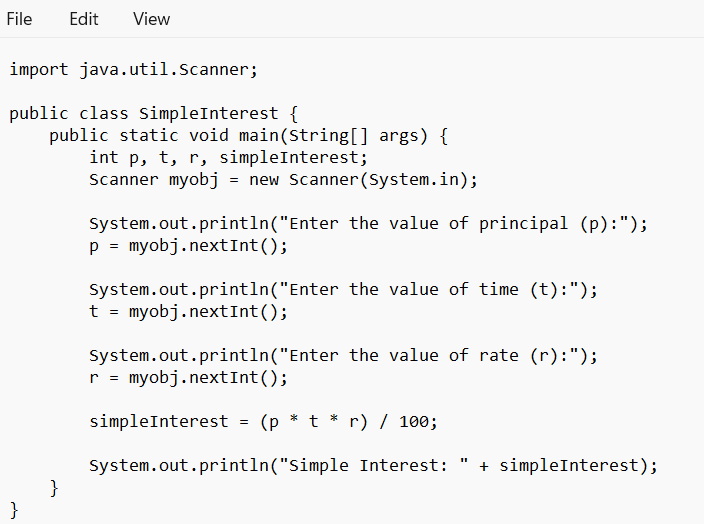
**OUTPUT:**

ERROR TABLE:

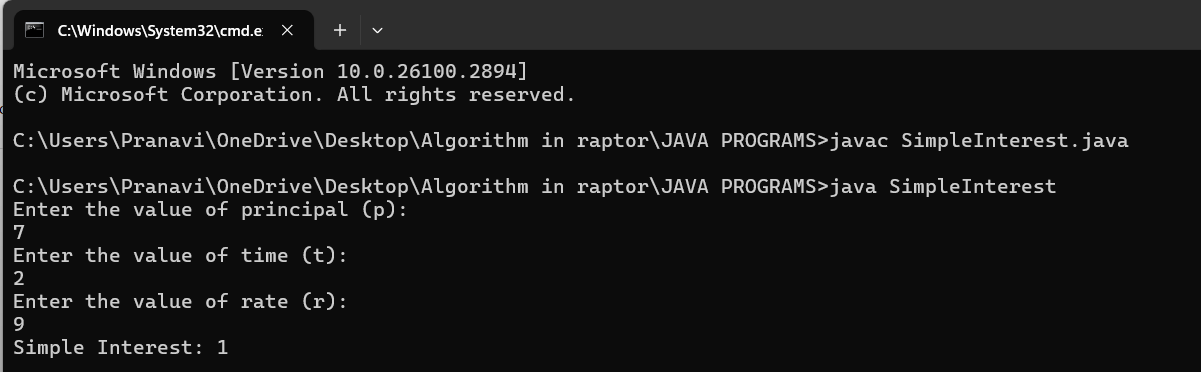
|  |  |
| --- | --- |
| **Code Error** | **Code rectification** |
| 1.writing small “S”in place of”S”  In system.out.println()  2.not giving strings to the name and section | 1.code is rectified by keeping capital “S”  2.Giving strings to name and section |

**PROGRAM-6:**

**AIM:**Calculate the simple interest

**CODE:**

**OUTPUT:**



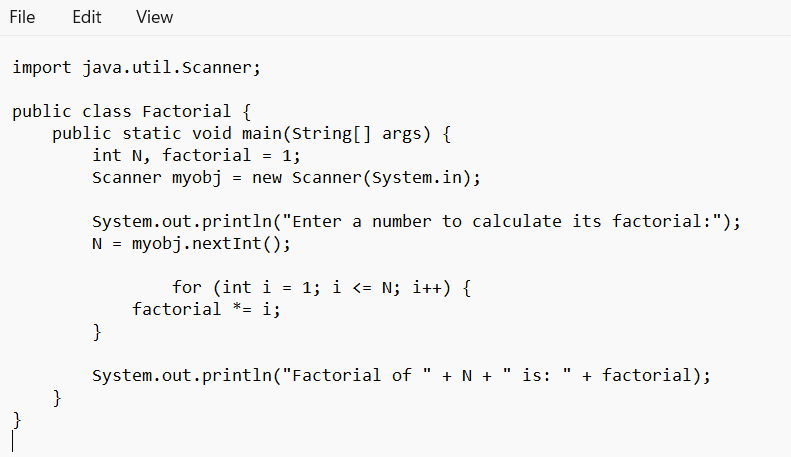
ERROR TABLE:

|  |  |
| --- | --- |
| **Code Error** | **Code rectification** |
| 1.writing small “S”in place of”S”  In system.out.println()  2.not giving strings to the name and section | 1. code is rectified by keeping capital “S” 2. Giving strings to name and section |

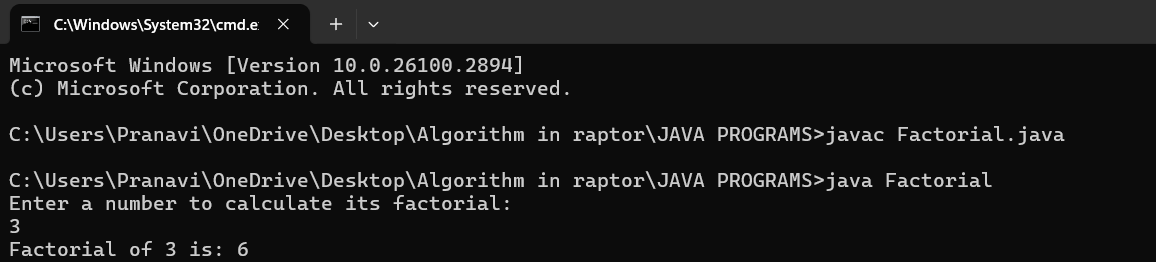
**PROGRAM-7:**

**AIM:**Factorial of N

**CODE:**



**OUTPUT:**

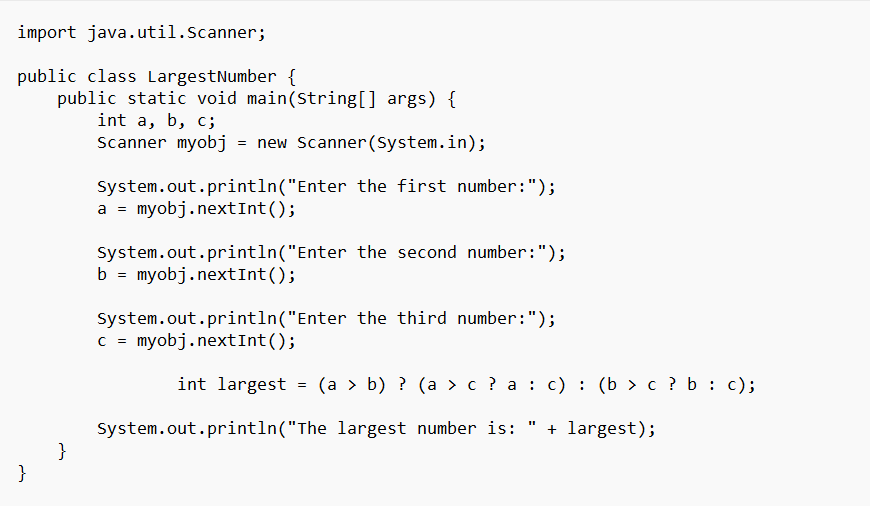


ERROR TABLE:

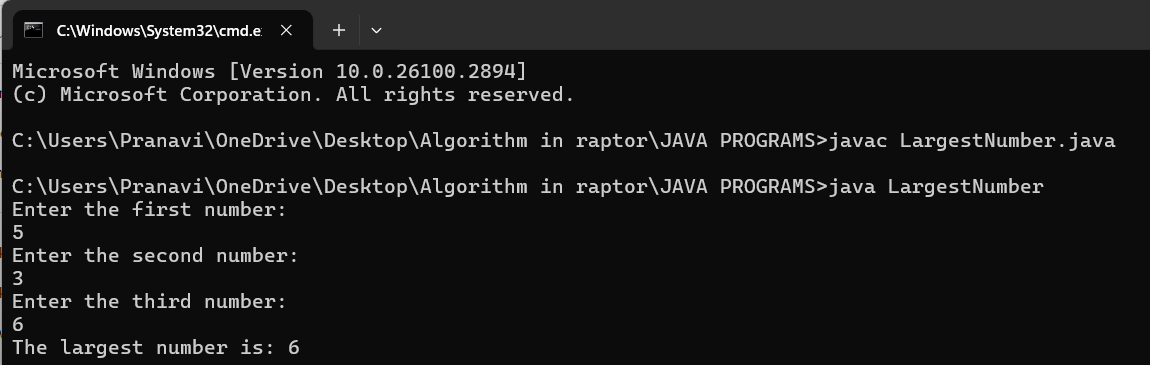
|  |  |
| --- | --- |
| **Code Error** | **Code rectification** |
| 1.writing small “S”in place of”S”  In system.out.println()  2.not giving strings to the name and section | 1. code is rectified by keeping capital “S” 2. Giving strings to name and section |

**PROGRAM-8:**

**AIM:**Largest of 3 numbers by ternary operators

**CODE:**

**OUTPUT:**



ERROR TABLE:

|  |  |
| --- | --- |
| **Code Error** | **Code rectification** |
| 1.writing small “S”in place of”S”  In system.out.println()  2.not giving strings to the name and section | 1. code is rectified by keeping capital “S” 2. Giving strings to name and section |

**WEEK 03**

**PROGRAM-9:**

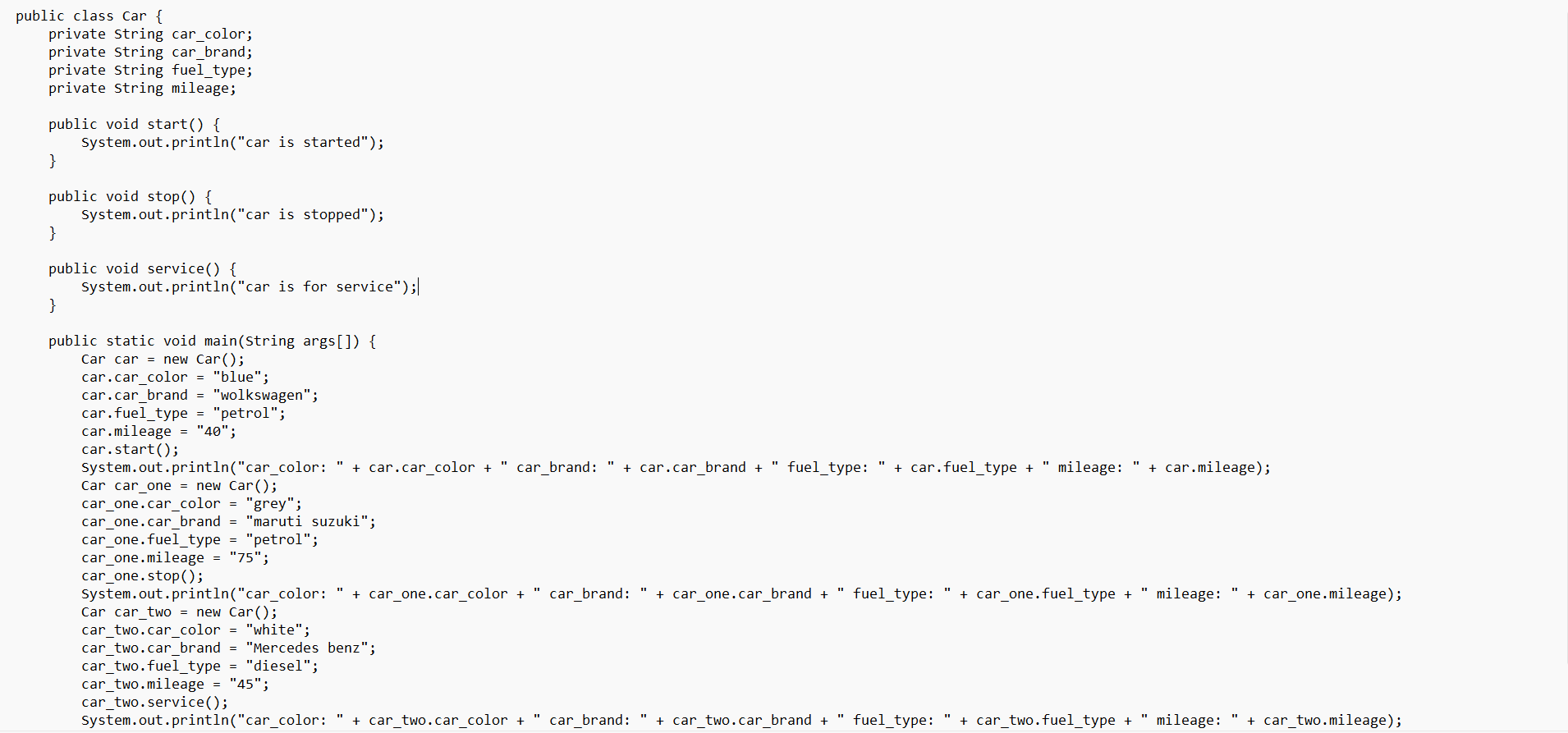
**AIM:**To create java program with following instructions :

1. Create a class with name Car

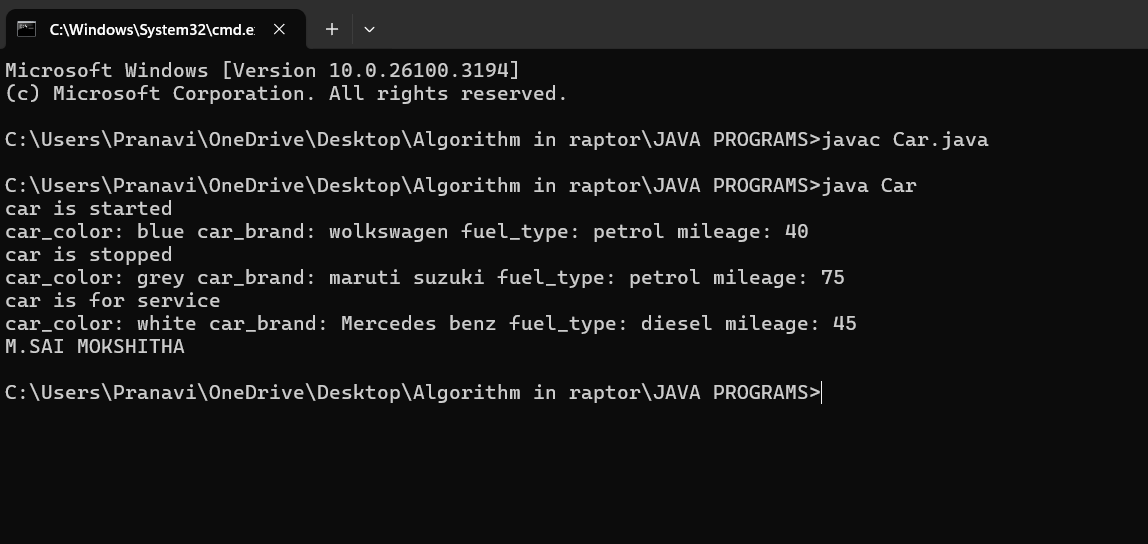
2. Create four attributes named car\_color, car\_brand, fuel\_type, mileage

3. Create these methods named start(),stop(),service()

4. Create the objects named car, car1,car2.

**CODE:**

**OUTPUT:**



ERROR TABLE:

|  |  |
| --- | --- |
| **Code Error** | **Code rectification** |
| 1. Not putting the semi-colon; after calling the function. 2. After Start, Stop, Service not giving the parenthesis ( ). | 1. Put the semi-colon after the writing the code. 2. After every method, put the parenthesis ( ). |

IMPORTANT POINTS:

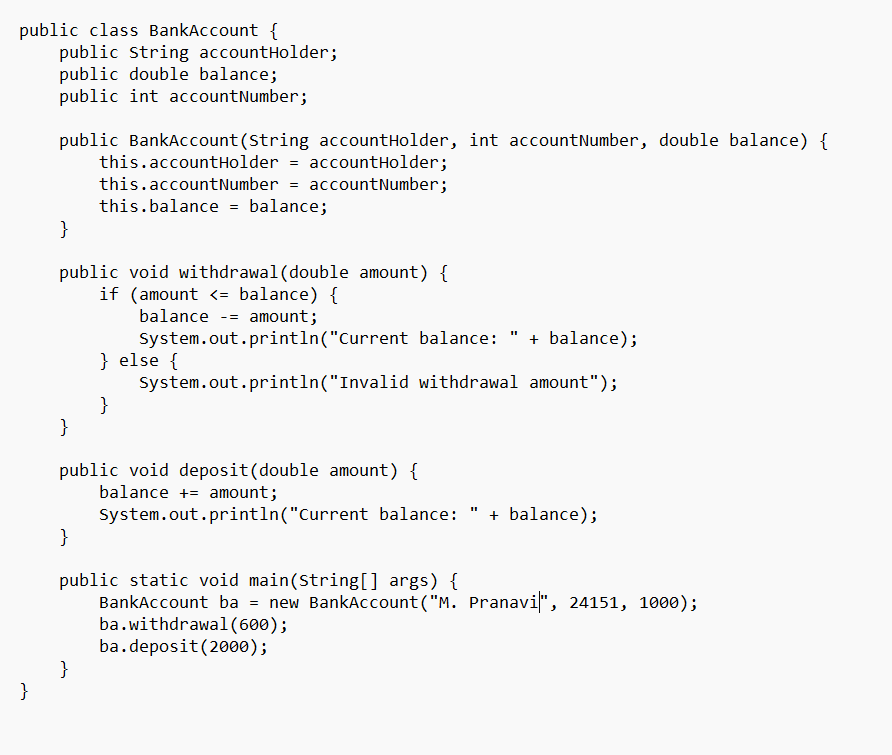
1. Before calling the function we should write the method properly.
2. Here, the “public void start( )” indicates that we are writing a method to call the function.
3. When we call a certain method, the process inside it will be printed as an output of the code.
4. Here the details inside the function are called objects, we can give any objects

**Class diagram:**

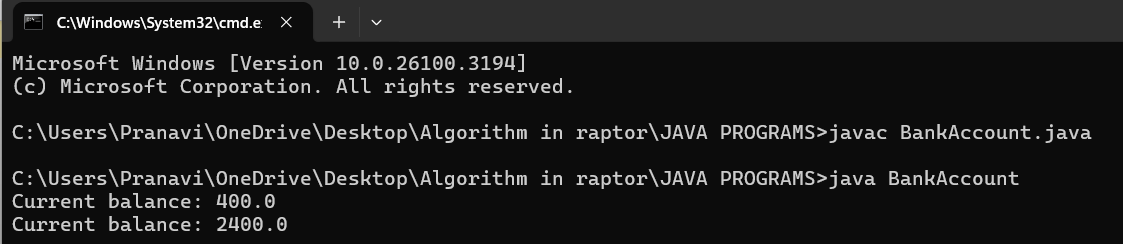
|  |
| --- |
| **car**  **-----------------------**  **-car\_color:string**  **-car\_brand:string**  **-fuel\_type:string**  **-milage:double**  **----------------------**  **+start():void**  **+stop():void**  **+service():void** |

**PROGRAM-10:**

**AIM:**To create a class Bank account with methods deposit() and withdraw() . create two sub classes savings account and checking account override the withdraw () method in each subclass to impose different withdrawal limits and fees.

**CODE:**

**OUTPUT:**



ERROR TABLE:

|  |  |
| --- | --- |
| **Code Error** | **Code rectification** |
| 1.Not putting the semi-colon; after calling the function.  2.After withdrawal, deposit not giving the parenthesis ( ). | 1.Put the semi-colon after the writing the code.  2.After every method, put the parenthesis ( ). |

IMPORTANT POINTS:

1. The condition inside the if statement must be correct.
2. It explains that if the withdrawal money is less than the money in the bank account, then we can withdraw the amount.

**Class diagram:**

|  |
| --- |
| **BankAccount**  **----------------------------------------------------------**  **-balance: double**  **----------------------------------------------------------**  **+BankAccount(intialBalance: double)**  **+deposit(amount: double):void**  **+withdraw(amount: double):void** |