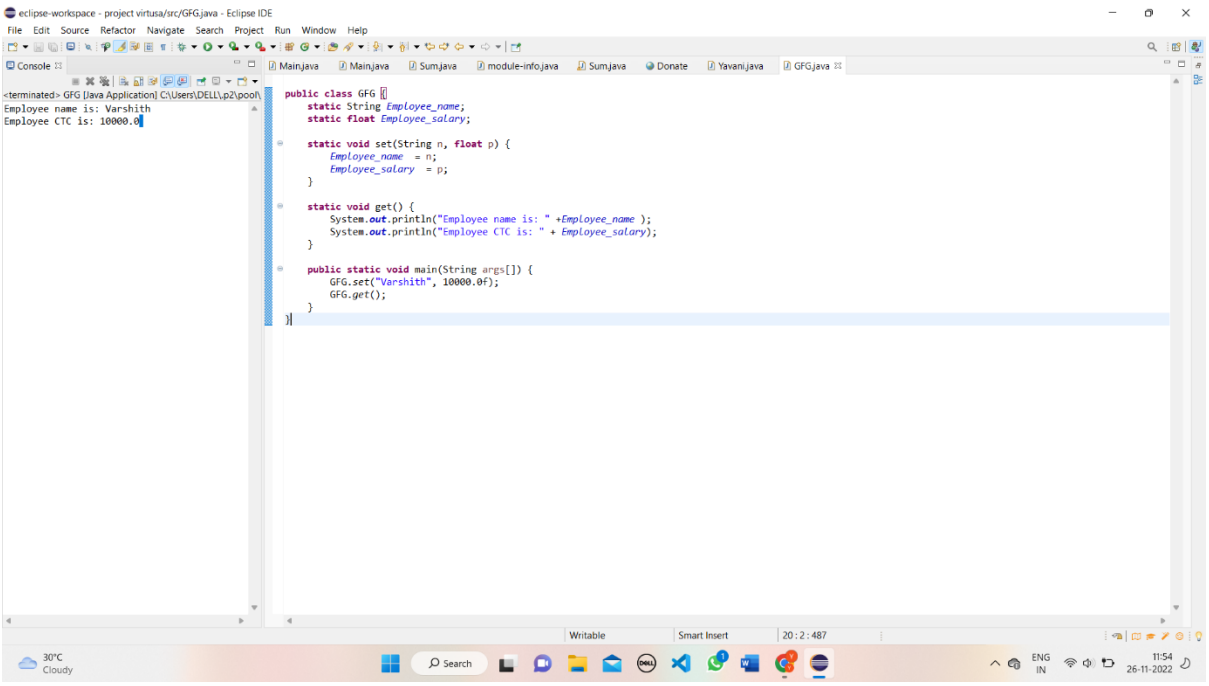
Java Oops concepts

1.Object and class

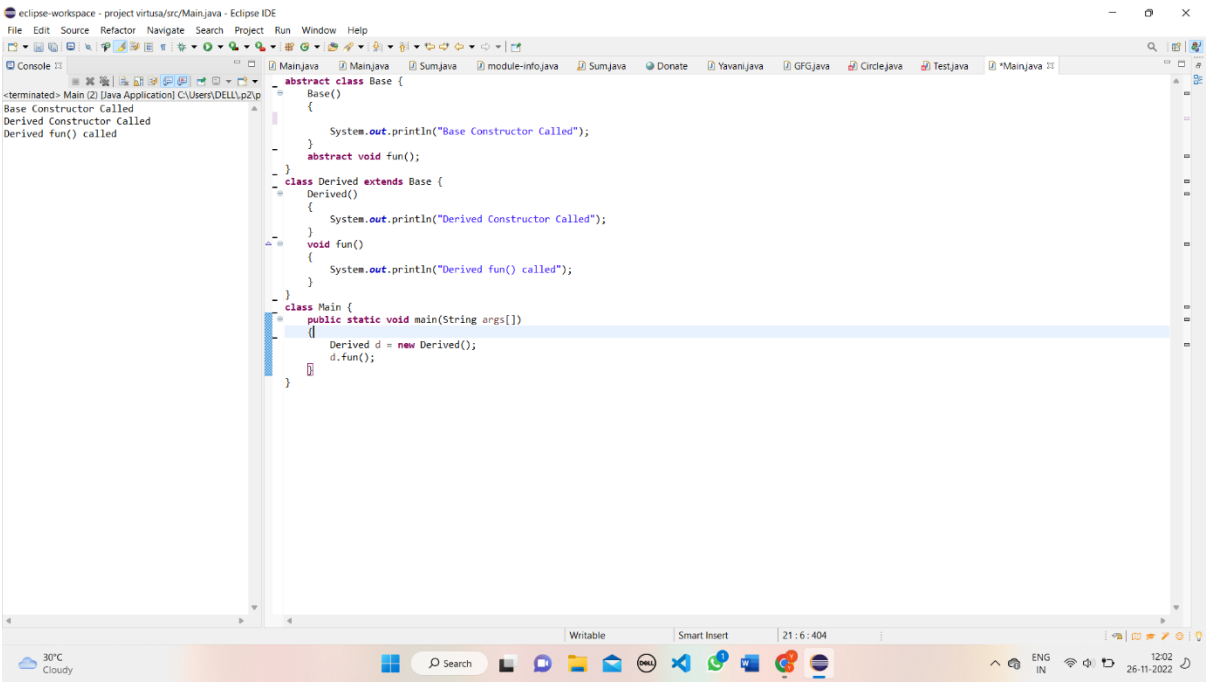
```
public class GFG {
       static String Employee_name;
    static float Employee_salary;

    static void set(String n, float p) {
        Employee_name  = n;
        Employee_salary  = p;
    }

    static void get() {
        System.out.println("Employee name is: " +Employee_name );
        System.out.println("Employee CTC is: " + Employee_salary);
    }

    public static void main(String args[]) {
        GFG.set("Varshith", 10000.0f);
        GFG.get();
    }
}
```



2.Abstract class

```
abstract class Base {
    Base()
    {

        System.out.println("Base Constructor Called");
    }
    abstract void fun();
```

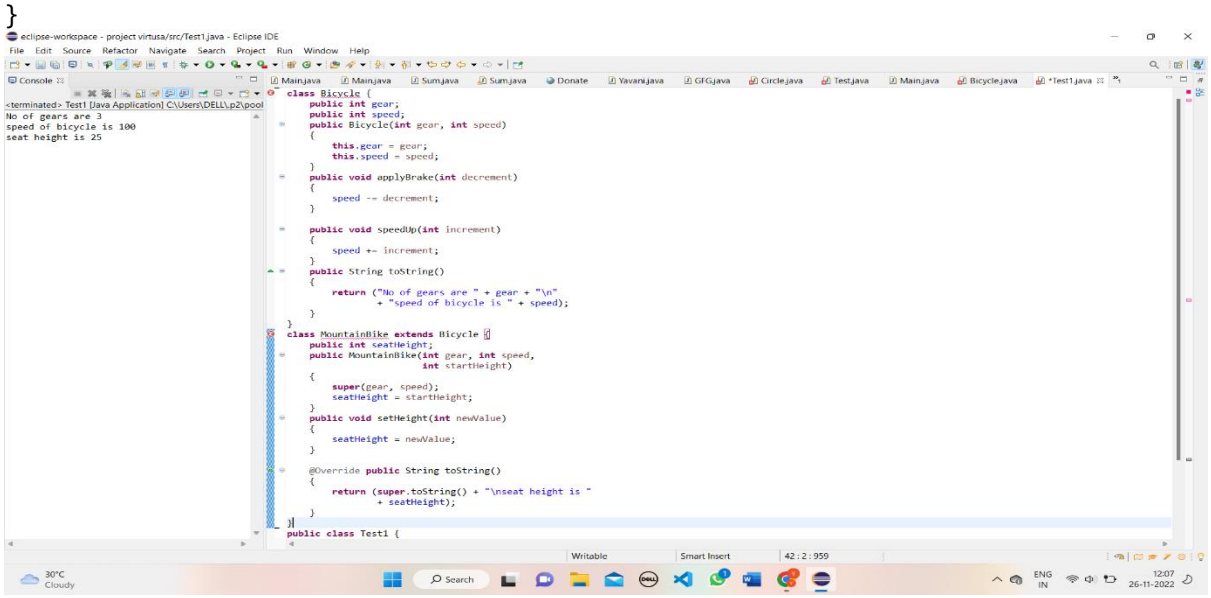
```
}
class Derived extends Base {
    Derived()
    {
        System.out.println("Derived Constructor Called");
    }
    void fun()
    {
        System.out.println("Derived fun() called");
    }
}
class Main {
    public static void main(String args[])
    {
        Derived d = new Derived();
        d.fun();
    }
}
```



3. Inheritance

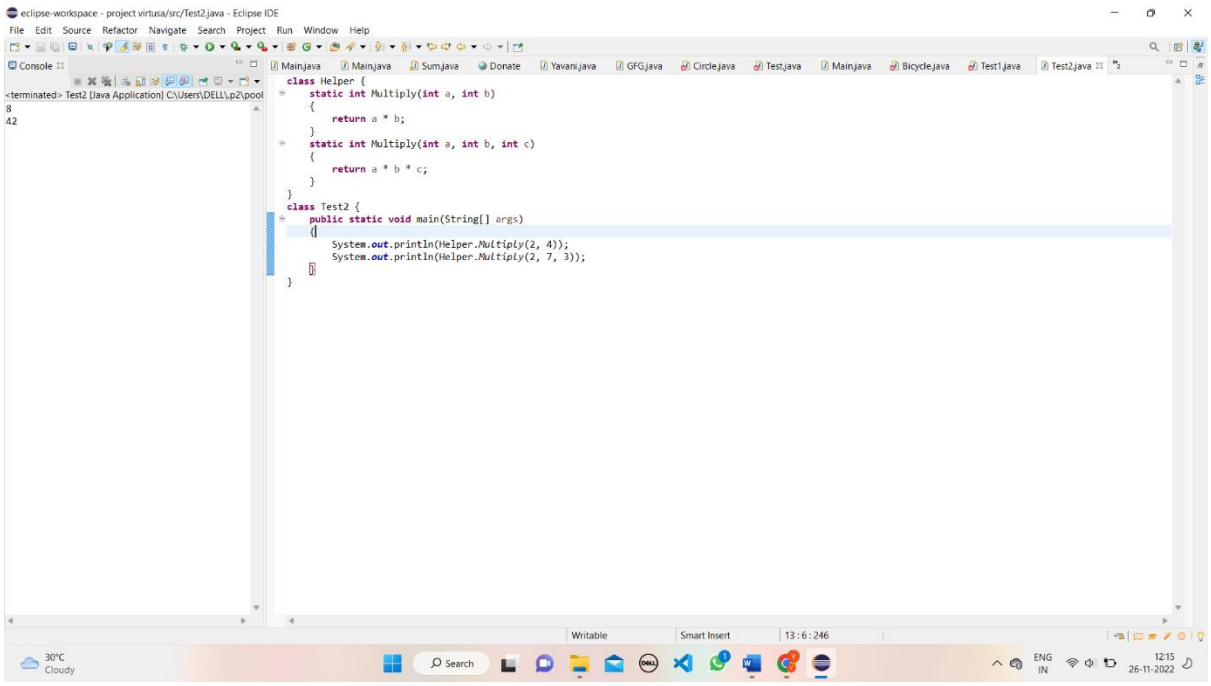
```
class Bicycle {
    public int gear;
    public int speed;
    public Bicycle(int gear, int speed)
    {
        this.gear = gear;
        this.speed = speed;
    }
    public void applyBrake(int decrement)
    {
        speed -= decrement;
```

```
    }

    public void speedUp(int increment)
    {
        speed += increment;
    }
    public String toString()
    {
        return ("No of gears are " + gear + "\n"
                + "speed of bicycle is " + speed);
    }
}
class MountainBike extends Bicycle {
    public int seatHeight;
    public MountainBike(int gear, int speed,
                        int startHeight)
    {
        super(gear, speed);
        seatHeight = startHeight;
    }
    public void setHeight(int newValue)
    {
        seatHeight = newValue;
    }

    @Override public String toString()
    {
        return (super.toString() + "\nseat height is "
                + seatHeight);
    }
}

public class Test {
    public static void main(String args[])
    {

        MountainBike mb = new MountainBike(3, 100, 25);
        System.out.println(mb.toString());
    }
}
```



4. Polymorphism

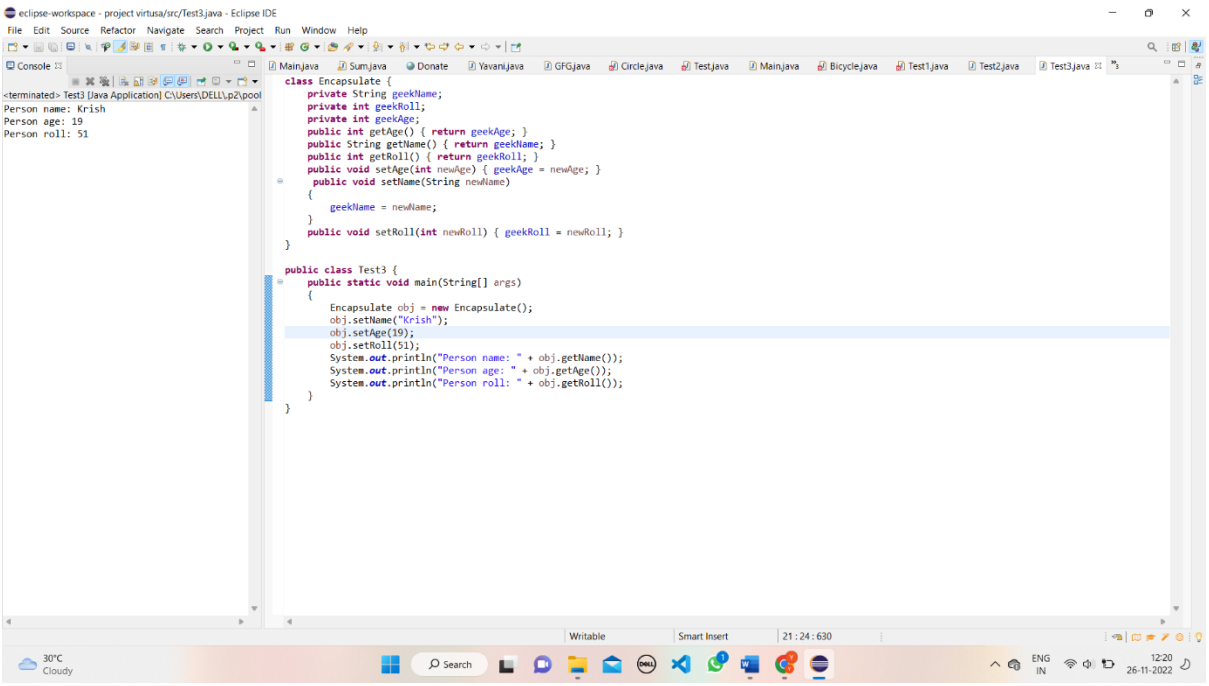
```
class Helper {
    static int Multiply(int a, int b)
    {
        return a * b;
    }
    static int Multiply(int a, int b, int c)
    {
        return a * b * c;
    }
}
class Test2 {
    public static void main(String[] args)
    {
        System.out.println(Helper.Multiply(2, 4));
        System.out.println(Helper.Multiply(2, 7, 3));
    }
}
```



Encapsulation

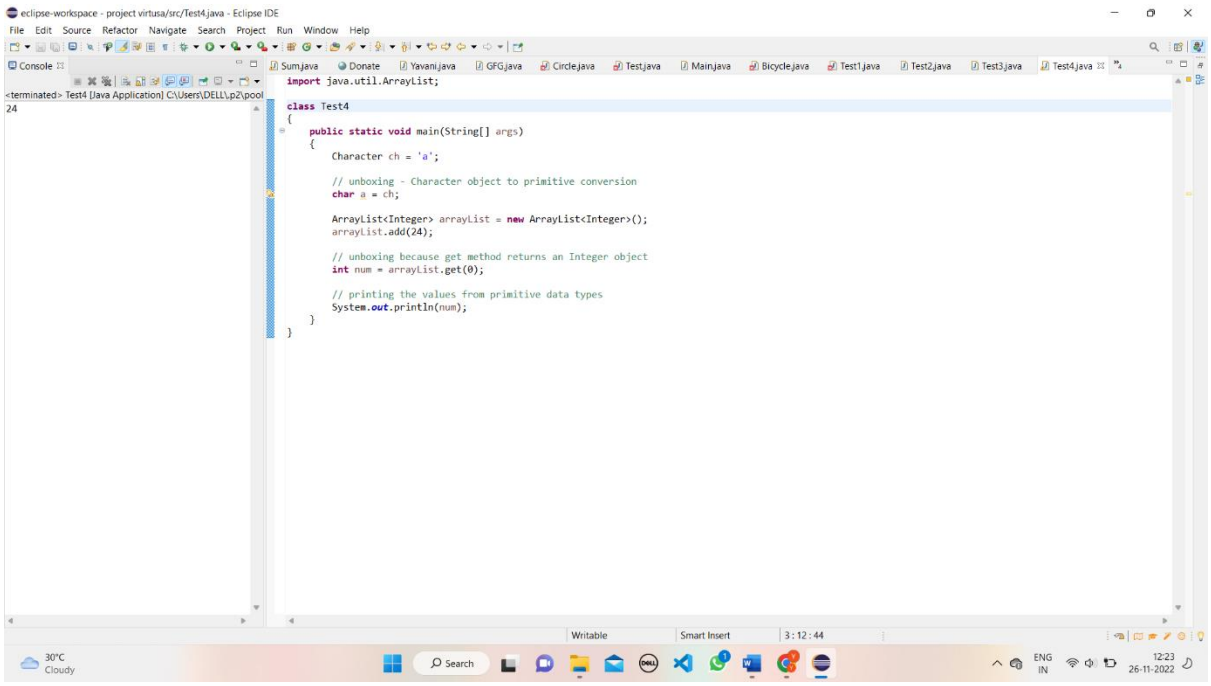
```
class Encapsulate {
    private String geekName;
    private int geekRoll;
    private int geekAge;
    public int getAge() { return geekAge; }
    public String getName() { return geekName; }
    public int getRoll() { return geekRoll; }
    public void setAge(int newAge) { geekAge = newAge; }
     public void setName(String newName)
    {
        geekName = newName;
    }
    public void setRoll(int newRoll) { geekRoll = newRoll; }
}
```

```java
public class Test3 {
    public static void main(String[] args)
    {
        Encapsulate obj = new Encapsulate();
        obj.setName("Krish");
        obj.setAge(19);
        obj.setRoll(51);
        System.out.println("Person name: " + obj.getName());
        System.out.println("Person age: " + obj.getAge());
        System.out.println("Person roll: " + obj.getRoll());
    }
}
```



Wrapper class

```java
import java.util.ArrayList;
class Test4
{
    public static void main(String[] args)
    {
        Character ch = 'a';

        // unboxing - Character object to primitive conversion
        char a = ch;

        ArrayList<Integer> arrayList = new ArrayList<Integer>();
        arrayList.add(24);

        // unboxing because get method returns an Integer object
        int num = arrayList.get(0);

        // printing the values from primitive data types
        System.out.println(num);
    }
}
```


eclipse-workspace - project virtusa/src/Test4.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Console
<terminated> Test4 [Java Application] C:\Users\DELL\.p2\pool
24
Sum.java
Donate
Yavani.java
GFG.java
Circle.java
Test.java
Main.java
Bicycle.java
Test1.java
Test2.java
Test3.java
Test4.java
import java.util.ArrayList;
class Test4
{
public static void main(String[] args)
{
Character ch = 'a';
// unboxing - Character object to primitive conversion
char a = ch;
ArrayList<Integer> arrayList = new ArrayList<Integer>();
arrayList.add(24);
// unboxing because get method returns an Integer object
int num = arrayList.get(0);
// printing the values from primitive data types
System.out.println(num);
}
}
Writable
Smart Insert
3 : 12 : 44
30°C
Cloudy
Search
ENG
IN
12:23
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