**NAME: ZISHNENDU SARKER**

**ROLL: 2K19/CO/450**

**JAVA PROGRAMMING**

**LAB ASSIGNMENT 05**

**Group: A, G3**

* **Java Program to Add Two Complex Numbers by Passing Class to a Function**

public class Complex {

double real;

double imag;

public Complex(double real, double imag) {

this.real = real;

this.imag = imag;

}

public static void main(String[] args) {

Complex n1 = new Complex(2.3, 4.5),

n2 = new Complex(3.4, 5.0),

temp;

temp = add(n1, n2);

System.out.printf("Sum = %.1f + %.1fi", temp.real, temp.imag);

}

public static Complex add(Complex n1, Complex n2)

{

Complex temp = new Complex(0.0, 0.0);

temp.real = n1.real + n2.real;

temp.imag = n1.imag + n2.imag;

return(temp);

}

}

**OUTPUT:**

Text

Description automatically generated

* **Java Program to Create custom exception**

import java.util.ArrayList;

import java.util.Arrays;

class CustomException extends Exception {

public CustomException(String message) {

super(message);

}

}

class Main {

ArrayList<String> languages = new ArrayList<>(Arrays.asList("Java", "Python", "JavaScript"));

public void checkLanguage(String language) throws CustomException {

if(languages.contains(language)) {

throw new CustomException(language + " already exists");

}

else {

languages.add(language);

System.out.println(language + " is added to the ArrayList");

}

}

public static void main(String[] args) {

Main obj = new Main();

try {

obj.checkLanguage("Swift");

obj.checkLanguage("Java");

}

catch(CustomException e) {

System.out.println("[" + e + "] Exception Occured");

}

}

**OUTPUT**:

Text

Description automatically generated with medium confidence

* **Java Program to Create an enum class**

enum Size{

SMALL, MEDIUM, LARGE, EXTRALARGE;

public String getSize() {

switch(this) {

case SMALL:

return "small";

case MEDIUM:

return "medium";

case LARGE:

return "large";

case EXTRALARGE:

return "extra large";

default:

return null;

}

}

public static void main(String[] args) {

System.out.println("The size of Pizza I get is " + Size.SMALL.getSize());

System.out.println("The size of Pizza I want is " + Size.LARGE.getSize());

}

}

**OUTPUT:**

Text

Description automatically generated

* **Java Program to Print object of a class**

class Test {

}

class Main {

public static void main(String[] args) {

Test obj = new Test();

System.out.println(obj);

}

}

**OUTPUT:**

Shape

Description automatically generated with medium confidence