**Junit:**

**1.\*\*\*\*\*\*\*\*ArithmeticException\*\*\*\*\*\*\*\*:**

**Main.java**

Path: Junit\ArithmeticException\src\Main.java

import java.io.BufferedReader;

import java.io.IOException;

import java.io.InputStreamReader;

public class Main {

public static void main(String[] args) throws NumberFormatException, IOException {

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

System.out.println("Enter the container price :");

int contPrice = Integer.parseInt(br.readLine());

System.out.println("Enter the number of items in the container :");

int noOfItem = Integer.parseInt(br.readLine());

System.out.println("The average price of the item is Rs." + new ShipmentBO().calculateAveragePrice(contPrice, noOfItem));

}

}

**ShipmentBO.java**

Path: Junit\ArithmeticException\src\ShipmentBO.java

public class ShipmentBO {

public double calculateAveragePrice(int contPrice,int noOfItem) {

int avgPrice = 0;

avgPrice = contPrice / noOfItem;

return avgPrice;

}

}

**ShipmentJunit.java**

Path:Junit\ArithmeticException\test\ShipmentJunit.java

import static org.junit.Assert.\*;

import org.junit.After;

import org.junit.Before;

import org.junit.Rule;

import org.junit.Test;

import org.junit.rules.ExpectedException;

public class ShipmentJunit {

ShipmentBO shipmentBO;

@Before

public void init() {

shipmentBO = new ShipmentBO();

}

@Test

public void testCalculatAverageWithoutZero() {

assertTrue(5==shipmentBO.calculateAveragePrice(10, 2));

assertTrue(20==shipmentBO.calculateAveragePrice(100, 5));

}

@Test(expected = ArithmeticException.class)

public void testCalculateAverageWithZero() {

assertTrue(5==shipmentBO.calculateAveragePrice(10,0));

}

@After

public void destroy() {

shipmentBO = null;

}

}

**2.\*\*\*\*\*\*\*\* Averageweightofitemsincontainer\*\*\*\*\*\*\***

**Main.Java**

Path: Junit\Averageweightofitemsincontainer\src\Main.java

import java.util.Scanner;

public class Main {

public static void main(String args[]) {

Scanner s = new Scanner(System.in);

System.out.println("Enter n1");

int n1 = s.nextInt();

System.out.println("Enter the weight of n1");

double wt1 = s.nextDouble();

System.out.println("Enter n2");

int n2 = s.nextInt();

System.out.println("Enter the weight of n2");

double wt2 = s.nextDouble();

ShipmentBO shipmentBO = new ShipmentBO();

double average = shipmentBO.calculateAverage(n1, wt1, n2, wt2);

System.out.printf("Average weight : %.2f", average);

}

}

**Main1.java**

Path: Junit\Averageweightofitemsincontainer\src\Main1.java

import java.util.Scanner;

import java.util.Arrays;

import java.util.ArrayList;

public class Main1 {

int ports\_num;

static int i, j, x, y, a, k;

public static void main(String args[]) {

Scanner scan = new Scanner(System.in);

System.out.println("Enter number of ports :");

int ports\_num = Integer.parseInt(scan.nextLine());

String[] data1 = new String[ports\_num];

if (ports\_num <= 0) {

System.out.println("Not entered port number accurately");

} else {

System.out.println("Enter port details :");

for (i = 0; i < ports\_num; i++) {

data1[i] = scan.nextLine();

}

}

for (k = 0; k < ports\_num; k++) {

ArrayList aList = new ArrayList(

Arrays.asList(data1[k].split("\\|")));

x = 0;

a = 0;

j = 2;

// while (j < aList.size()) {

// if (aList.get(j) == 1) {

// a = a + 1;

// }

// j = j + 1;

// }

System.out.println("One mode of transportation :");

if (a > 0 && a < 2) {

System.out.println(aList.get(0) + " " + aList.get(1));

} else {

System.out.println("No such transportation available");

}

System.out.println("More than one mode of transportation :");

if (a > 1 && a < 4) {

System.out.println(aList.get(0) + " " + aList.get(1));

} else {

System.out.println("No such transportation available");

}

}

if (scan != null)

scan.close();

}

}

**ShipmentBO.java:**

Path: Junit\Averageweightofitemsincontainer\src\ShipmentBO.java

public class ShipmentBO {

public double calculateAverage(int n1, double wt1, int n2, double wt2) {

if (n1 + n2 == 0)

return 0;

return ((n1 \* wt1) + (n2 \* wt2)) / (n1 + n2);

}

}

**ShipmentJunit.java:**

Path: Junit\Averageweightofitemsincontainer\test

import static org.junit.Assert.assertEquals;

import static org.junit.Assert.assertFalse;

import static org.junit.Assert.assertNotNull;

import static org.junit.Assert.assertNull;

import org.junit.After;

import org.junit.Before;

import org.junit.Test;

public class ShipmentJUnit {

double delta = 0.01;

ShipmentBO shipment;

@Before

public void setup() {

shipment = new ShipmentBO();

}

@Test

public void testCalculateAverage() {

assertEquals(0, shipment.calculateAverage(0, 0, 0, 0),0);

assertEquals(42.5, shipment.calculateAverage(1, 20, 3, 50),0);

}

}

**3.\*\*\*\*\*\*** **Build a shipment report using List\*\*\*\*\*:**

**4.\*\*\*\*\*\*** **CargoObjectEquality\*\*\*\*\*:**