Week 3

Question 1:

Write a java program to add the two numbers.

import java.util.Scanner;

public class One {

public static void main(String[] args) {

Scanner scan = new Scanner(System.in);

System.out.print("\nEnter first number: ");

double num1 = scan.nextDouble();

System.out.print("Enter second number: ");

double num2 = scan.nextDouble();

double result = num1 + num2;

System.out.printf("%.2f + %.2f = %.2f \n\n", num1, num2, result);

scan.close();

}

}

Code:

PS D:\Uni Material\LAB\sem 3\Week 3> javac One.java

PS D:\Uni Material\LAB\sem 3\Week 3> java One

Enter first number: 25

Enter second number: 3.89

25.00 + 3.89 = 28.89

PS D:\Uni Material\LAB\sem 3\Week 3>

Output:

Question 2: 1

Write a java program to multiply two floating numbers.

Code:

import java.util.Scanner;

public class Two {

public static void main(String[] args) {

Scanner scan = new Scanner(System.in);

System.out.print("Enter first number: ");

double num1 = scan.nextDouble();

System.out.print("Enter second number: ");

double num2 = scan.nextDouble();

double result = num1 \* num2;

System.out.printf("Multiplication result of %.2f and %.2f is: %.2f", num1, num2, result);

scan.close();

}

}

PS D:\Uni Material\LAB\sem 3\Week 3> javac Two.java

PS D:\Uni Material\LAB\sem 3\Week 3> java Two

Enter first number: 78.05

Enter second number: 68.21

Multiplication result of 78.05 and 68.21 is: 5323.79

PS D:\Uni Material\LAB\sem 3\Week 3>

Output:

Question 3:

Write a java program to display a cube of a number.

import java.util.Scanner;

public class Three {

public static void main (String[] args){

Scanner scan = new Scanner(System.in);

System.out.print("Enter the number: ");

double num = scan.nextDouble();

double result = num\*num\*num;

System.out.printf("Cube of %.2f is: %.2f",num, result);

scan.close();

}

}

Code:

PS D:\Uni Material\LAB\sem 3\Week 3> javac Three.java

PS D:\Uni Material\LAB\sem 3\Week 3> java Three

Enter the number: 89

Cube of 89.00 is: 704969.00

PS D:\Uni Material\LAB\sem 3\Week 3>

Output:

Question 4:

Write a Java program that takes three numbers as input to calculate and print average of numbers.

Code:

import java.util.Scanner;

public class Four {

public static void main(String[] args) {

Scanner scan = new Scanner(System.in);

System.out.print("Enter three numbers (space-separated): ");

double num1 = scan.nextDouble();

double num2 = scan.nextDouble();

double num3 = scan.nextDouble();

double average = (num1 + num2 + num3) / 3;

System.out.printf("Average of %.2f, %.2f and %.2f is: %.2f", num1, num2, num3, average);

scan.close();

}

}

PS D:\Uni Material\LAB\sem 3\Week 3> javac Four.java

PS D:\Uni Material\LAB\sem 3\Week 3> java Four

Enter three numbers (space-separated): 2 3 4

Average of 2.00, 3.00 and 4.00 is: 3.00

PS D:\Uni Material\LAB\sem 3\Week 3>

Question 5:

Code:

Write a Java program to compute the distance between two points.

import java.util.Scanner;

public class Five {

public static void main(String[] args) {

Scanner scan = new Scanner(System.in);

System.out.print("Enter the first point (space separated - x y): ");

double x1 = scan.nextDouble(), y1 = scan.nextDouble();

System.out.print("Enter the second point (space separated - x y): ");

double x2 = scan.nextDouble(), y2 = scan.nextDouble();

double distance = Math.sqrt( ( (x1 - x2)\*(x1 - x2) ) + ( (y1 - y2)\*(y1-y2) ) );

System.out.printf("Distance between (%.2f, %.2f) and (%.2f, %.2f) is: %.2f", x1, y1, x2, y2, distance);

scan.close();

}

}

Output:

PS D:\Uni Material\LAB\sem 3\Week 3> javac Five.java

PS D:\Uni Material\LAB\sem 3\Week 3> java Five

Enter the first point (space separated - x y): 1.12 5.3

Enter the second point (space separated - x y): 2 4.68

Distance between (1.12, 5.30) and (2.00, 4.68) is: 1.08

PS D:\Uni Material\LAB\sem 3\Week 3>

Optional

Write a Java program to swap two numbers using a temporary variable.

Question 6:

Output:

import java.util.Scanner;

public class Six {

public static void main(String[] args) {

Scanner scan = new Scanner(System.in);

System.out.print("Enter first number (a): ");

int a = scan.nextInt();

System.out.print("Enter second number (b): ");

int b = scan.nextInt();

System.out.printf("Before swapping: a = %d, b = %d\n", a, b);

int temp = a; a = b; b = temp;

System.out.printf("After swapping: a = %d, b = %d\n", a, b);

scan.close();

}

}

Code:

Write a Java program to calculate the area of a rectangle given its length and breadth.

import java.util.Scanner;

public class Seven {

public static void main(String[] args) {

Scanner scan = new Scanner(System.in);

System.out.print("Enter the length of rectangle: ");

double length = scan.nextDouble();

System.out.print("Enter the breadth of rectangle: ");

double breadth = scan.nextDouble();

double area = length\*breadth;

System.out.printf("Area of rectangle is : %.2f", area);

scan.close();

}

}

Code:

Question 7:

Output:

PS D:\Uni Material\LAB\sem 3\Week 3> javac Six.java

PS D:\Uni Material\LAB\sem 3\Week 3> java Six

Enter first number (a): 42

Enter second number (b): 17

Before swapping: a = 42, b = 17

After swapping: a = 17, b = 42

PS D:\Uni Material\LAB\sem 3\Week 3>

PS D:\Uni Material\LAB\sem 3\Week 3> javac Seven.java

PS D:\Uni Material\LAB\sem 3\Week 3> java Seven

Enter the length of rectangle: 49

Enter the breadth of rectangle: 23

Area of rectangle is : 1127.00

PS D:\Uni Material\LAB\sem 3\Week 3>

Output:

import java.util.Scanner;

public class Eight {

public static void main(String[] args) {

Scanner scan = new Scanner(System.in);

System.out.println("Select the unit you want to convert FROM:");

System.out.println(" 1. Celsius (C or c)");

System.out.println(" 2. Fahrenheit (F or f)");

System.out.print("Enter your choice (1/C or 2/F): ");

String input = scan.next().toLowerCase();

switch (input) {

case "1", "c" -> {

System.out.print("Enter temperature in Celsius: ");

double celsius = scan.nextDouble();

double fahrenheit = (celsius \* 9.0 / 5) + 32;

System.out.printf("%.2f C = %.2f F\n", celsius, fahrenheit);

}

case "2", "f" -> {

System.out.print("Enter temperature in Fahrenheit: ");

double fahrenheit = scan.nextDouble();

double celsius = (fahrenheit - 32) \* 5.0 / 9;

System.out.printf("%.2f F = %.2f C\n", fahrenheit, celsius);

}

default -> System.out.println(" Invalid input. Please enter 1, 2, C, or F.");

}

}

}

Write a Java program to convert temperature from Celsius to Fahrenheit.

Code:

Question 8:

Output:

PS D:\Uni Material\LAB\sem 3\Week 3> javac Eight.java

PS D:\Uni Material\LAB\sem 3\Week 3> java Eight

Select the unit you want to convert FROM:

1. Celsius (C or c)

2. Fahrenheit (F or f)

Enter your choice (1/C or 2/F): f

Enter temperature in Fahrenheit: 102

102.00 F = 38.89 C

PS D:\Uni Material\LAB\sem 3\Week 3>

PS D:\Uni Material\LAB\sem 3\Week 3> javac Nine.java

PS D:\Uni Material\LAB\sem 3\Week 3> java Nine

Enter the first number (dividend): 77

Enter the second number (divisor): 12

Quotient: 6

Remainder: 5

PS D:\Uni Material\LAB\sem 3\Week 3>

Output:

import java.util.Scanner;

public class Nine {

public static void main(String[] args) {

Scanner scan = new Scanner(System.in);

System.out.print("Enter the first number (dividend): ");

int num1 = scan.nextInt();

System.out.print("Enter the second number (divisor): ");

int num2 = scan.nextInt();

int quotient = num1 / num2;

int remainder = num1 % num2;

System.out.println("Quotient: " + quotient);

System.out.println("Remainder: " + remainder);

scan.close();

}

}

Code:

Write a Java program that takes two integer inputs and computes their remainder and quotient.

Question 9:

Output:

Code:

import java.util.Scanner;

public class Ten {

public static void main(String[] args) {

Scanner scan = new Scanner(System.in);

System.out.print("Enter the radius of the circle: ");

double radius = scan.nextDouble();

double circumference = 2 \* Math.PI \* radius;

System.out.printf("The circumference of the circle with radius %.2f is: %.2f\n", radius, circumference);

scan.close();

}

}

Write a Java program to find the circumference of a circle given its radius.

Question 10:

PS D:\Uni Material\LAB\sem 3\Week 3> javac Ten.java

PS D:\Uni Material\LAB\sem 3\Week 3> java Ten

Enter the radius of the circle: 7.52

The circumference of the circle with radius 7.52 is: 47.25

PS D:\Uni Material\LAB\sem 3\Week 3>

Output: