**ASSIGNMENT DAY 1**

**ASSISTED PROBLEMS**

**1. Welcome to Bridgelabz!**

**Write a program that prints "Welcome to Bridgelabz!" to the screen.**

public class Welcome {  
 public static void main(String[] Args) {  
 System.*out*.println("Welcome to Bridgelabz!");  
 }  
}

**OUTPUT:**

Welcome to Bridgelabz!

**2. Add Two Numbers**

**Write a program that takes two numbers as input from the user and prints**

**their sum.**

import java.util.Scanner;  
public class Main {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 int a ,b;  
 System.*out*.println("Enter the First Number: ");  
 a = scanner.nextInt();  
 System.*out*.println(("Enter the Second Number: "));  
 b = scanner.nextInt();  
 System.*out*.println("The sum of " + a + " and " + b + " is " + (a+b));  
 }  
}

**OUTPUT:**

Enter the First Number:

13

Enter the Second Number:

17

The sum of 13 and 17 is 30

**3. Celsius to Fahrenheit Conversion**

**Write a program that takes the temperature in Celsius as input and converts**

**it to Fahrenheit using the formula:**

**Fahrenheit = (Celsius \* 9/5) + 32.**

import java.util.Scanner;  
public class Main {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 float celsius;  
 System.*out*.println("Enter the temperature in Celsius: ");  
 celsius= scanner.nextFloat();  
 float fahrenheit = (celsius \* 9/5) + 32;  
 System.*out*.println(celsius + " celscius is equal to " + fahrenheit + " fahrenheit");  
 }  
}

**OUTPUT:**

Enter the temperature in Celsius: 40

40.0 celscius is equal to 104.0 fahrenheit

**4. Area of a Circle**

**Write a program to calculate the area of a circle. Take the radius as input**

**and use the formula:**

**Area = π \* radius^2.**

import java.util.Scanner;  
public class Main {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 float radius;  
 System.*out*.println("Enter the radius: ");  
 radius = scanner.nextFloat();  
 double area = Math.*PI* \* Math.*pow*(radius,2);  
 System.*out*.println("The area of the circle is " + area);  
 }  
}

**OUTPUT:**

Enter the radius: 7

The area of the circle is 153.93804002589985

**5. Volume of a Cylinder**

**Write a program to calculate the volume of a cylinder. Take the radius and**

**height as inputs and use the formula:**

**Volume = π \* radius^2 \* height.**

import java.util.Scanner;  
public class Main {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 float radius, height;  
 System.*out*.println("Enter the radius: ");  
 radius = scanner.nextFloat();  
 System.*out*.println("Enter the height: ");  
 height = scanner.nextFloat();  
 double vol = Math.*PI* \* Math.*pow*(radius,2) \* height;  
 System.*out*.println("The Volume of the Cylinder is " + vol);  
 }  
}

**OUTPUT;**

Enter the radius: 13

Enter the height: 4

The Volume of the Cylinder is 2123.7166338267

**SELF PROBLEMS**

**1. Calculate Simple Interest**

**Write a program to calculate simple interest using the formula:**

**Simple Interest = (Principal \* Rate \* Time) / 100.**

**Take Principal, Rate, and Time as inputs from the user.**

import java.util.Scanner;  
public class Main {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 int principal, rate, time;  
 System.*out*.print("Enter the Principal Amount: ");  
 principal = scanner.nextInt();  
 System.*out*.print("Enter the rate of interest: ");  
 rate = scanner.nextInt();  
 System.*out*.print("Enter the time: ");  
 time = scanner.nextInt();  
 float SI = (float) (principal \* rate \* time) / 100;  
 System.*out*.println("The Simple Interest is " + SI);  
 }  
}

**OUTPUTl:**

Enter the Principal Amount: 10000

Enter the rate of interest: 15

Enter the time: 10

The Simple Interest is 15000.0

**2. Perimeter of a Rectangle**

**Write a program to calculate the perimeter of a rectangle. Take the length**

**and width as inputs and use the formula:**

**Perimeter = 2 \* (length + width).**

import java.util.Scanner;  
public class Main {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 int length, width;  
 System.*out*.print("Enter the length: ");  
 length = scanner.nextInt();  
 System.*out*.print("Enter the width: ");  
 width = scanner.nextInt();  
 int perimeter = 2 \* (length + width);  
 System.*out*.println("The perimeter of the triangle is " + perimeter);  
 }  
}

**OUTPUT:**

Enter the length: 50

Enter the width: 25

The perimeter of the triangle is 150

**3. Power Calculation**

**Write a program that takes two numbers as input: a base and an exponent,**

**and prints the result of base raised to the exponent (without using loops or**

**conditionals).**

import java.util.Scanner;  
public class Main {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 int base, exponent;  
 System.*out*.print("Enter the base value: ");  
 base = scanner.nextInt();  
 System.*out*.print("Enter the exponent value: ");  
 exponent = scanner.nextInt();  
 double result = Math.*pow*(base,exponent);  
 System.*out*.println("The power is " + result);  
 }}

**OUTPUT:**

Enter the base value: 2

Enter the exponent value: 5

The power is 32.0

**4. Calculate Average of Three Numbers**

**Write a program that takes three numbers as input from the user and prints their avg.**

import java.util.Scanner;  
public class Main {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 int n1, n2, n3;  
 System.*out*.print("Enter the value 1: ");  
 n1 = scanner.nextInt();  
 System.*out*.print("Enter the value 2: ");  
 n2 = scanner.nextInt();  
 System.*out*.print("Enter the value 3: ");  
 n3 = scanner.nextInt();  
 double average = (double) (n1 + n2 + n3) / 3;  
 System.*out*.println("The average of three is " + average);}  
}

**OUTPUT:**

Enter the value 1: 45

Enter the value 2: 65

Enter the value 3: 55

The average of three is 55.0

**5. Convert Kilometers to Miles**

**Write a program that takes the distance in kilometers as input from the user**

**and converts it into miles using the formula:**

**Miles = Kilometers \* 0.621371.**

import java.util.Scanner;  
public class Main {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 int km;  
 System.*out*.print("Enter the kilometer: ");  
 km = scanner.nextInt();  
 int miles = (int) (km \* 0.621371);  
 System.*out*.println(km + " km is equal to " + miles + " miles");  
 }  
}

**OUTPUT:**

Enter the kilometer: 76

76 km is equal to 47 miles