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