1. Welcome to Bridgelabz!

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

```
import java.util.Scanner;


class main{
   public static void main(String[] args);
    System.out.print("Welcome to Bridgelabz!");
 }
}
```

```
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>javac welcome.java

C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>java welcome.java
Welcome to Bridgelabz!
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>
```

2. Add Two Numbers

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

their sum.

```
import java.util.Scanner;
class main{
   public static void main(String[] args){
    Scanner sc=new Scanner(System.in);
    System.out.print("Enter the first number: ");
    int a=sc.nextInt();
     System.out.print("Enter the second number: ");
    int b=sc.nextInt();
    int sum=a+b;
     System.out.print(" the  number is:"+sum);
     sc.close();
 }
}
```

```
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>javac AddTwoNumbers.java

C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>java AddTwoNumbers.java
Enter the first number: 12
Enter the second number: 23
 the  number is:35
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>
```

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;
class main{
   public static void main(String[] args){
    Scanner sc=new Scanner(System.in);
    System.out.print("Enter the celsius : ");
    int a=sc.nextInt();
     int Fahrenheit = (a* 9/5) + 32
    System.out.print(" the Fahrenheit is: "+fahrenheit);
   sc.close();
 }
}
```

```
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>javac AddTwoNumbers.java

C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>java AddTwoNumbers.java
Enter the first number: 12
Enter the second number: 23
 the  number is:35
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>javac CelsiusFahrenheit.java

C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>java CelsiusFahrenheit.java
Enter the Celsius : 23
 the Fahrenheit is: 73
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>
```

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;
class main{
   public static void main(String[] args){
    Scanner sc=new Scanner(System.in);
```

```
   System.out.print("Enter the Radius : ");
   int a=sc.nextInt();
    float Area = 22/7 * a^2;
   System.out.print(" the Area of circle is: "+Area);
  sc.close();
 }
}
```

```
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>javac Areaofcircle.java

C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>java Areaofcircle.java
Enter the Radius : 5
 the Area of circle is: 13.0
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>
```

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;
class main{
  public static void main(String[] args){
   Scanner sc=new Scanner(System.in);
   System.out.print("Enter the Radius : ");
   int a=sc.nextInt();
    System.out.print("Enter the Height : ");
    int b=sc.nextInt();
   float Volume = 22/7 * a^2 * b;
   System.out.print(" the volume of cylinder  is: "+Volume);
  sc.close();
 }
}
```

```
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>javac volumeofcylinder.java

C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>java volumeofcylinder.java
Enter the Radius : 12
Enter the Height : 5
 the volume of cylinder  is: 46.0
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>
```

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;
class main{
   public static void main(String[] args){
    Scanner sc=new Scanner(System.in);
    System.out.print("Enter the Principal : ");
    int a=sc.nextInt();
     System.out.print("Enter the Rate : ");
     int b=sc.nextInt();
     System.out.print("Enter the Time : ");
     int c=sc.nextInt();
    float SimpleInterest = (a * b * c) / 100;
    System.out.print(" the volume of Simple Interest  is: "+SimpleInterest);
   sc.close();
 }
}
```

```
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>java SimpleInterest.java
Enter the Principal : 10000
Enter the Rate : 2
Enter the Time : 2
 the volume of Simple Interest  is: 400.0
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>
```

2. Perimeter of a Rectangle

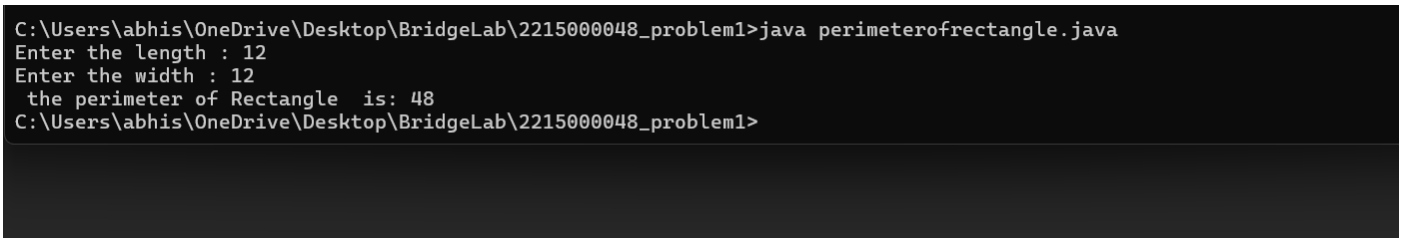
Write a program to calculate the perimeter of a rectangle. Take the length

and width as inputs and use the formula:

Perimeter = 2 * (length + width).

```
import java.util.Scanner;
class main{
   public static void main(String[] args){
```

```
   Scanner sc=new Scanner(System.in);
   System.out.print("Enter the length : ");
   int a=sc.nextInt();
    System.out.print("Enter the width : ");
    int b=sc.nextInt();
   int Perimeter = 2 * (a + b);
   System.out.print(" the perimeter of Rectangle  is: "+Perimeter);
  sc.close();
 }
}
```



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;
import java.lang.Math;
class main{
   public static void main(String[] args){
    Scanner sc=new Scanner(System.in);
    System.out.print("Enter the base : ");
    int a=sc.nextInt();
     System.out.print("Enter the exponent : ");
     int b=sc.nextInt();

    double result = Math.pow(a,b);
    System.out.print(" the result  is: "+result);
   sc.close();
 }
}
```

```
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>javac base_exponent.java

C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>java base_exponent.java
Enter the base : 2
Enter the exponent : 4
 the result  is: 16.0
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>
```

4. Calculate Average of Three Numbers

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

their average.

```
import java.util.Scanner;

class main{

   public static void main(String[] args){

    Scanner sc=new Scanner(System.in);

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

    int a=sc.nextInt();

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

     int b=sc.nextInt();

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

     int c=sc.nextInt();

    float avg=(a+b+c)/3;

    System.out.print(" the  avg  is: "+avg);

   sc.close();


 }

}
```

```
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>javac avg.java

C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>java avg.java
Enter the first : 2
Enter the second : 3
Enter the third : 4
 the  avg  is: 3.0
C:\Users\abhis\OneDrive\Desktop\BridgeLab\2215000048_problem1>
```

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;
```

```
class main{
   public static void main(String[] args){
    Scanner sc=new Scanner(System.in);
    System.out.print("Enter the first : ");
    int a=sc.nextInt();
    double Miles = a * 0.621371;
    System.out.print(" miles  is: "+Miles);
   sc.close();
  }
}
```