Assisted Problems

GitHub Repository

1. Welcome to Bridgelabz!

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

```java
public class WelcomeToBridgeLabz {
    public static void main(String[] args) {
        System.out.println("Welcome to BridgeLabz!");
    }
}
```

```
NppExec Console
:d $(CURRENT_DIRECTORY)
:D: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
:urrent directory: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
================ READY ================
avac $(FILE_NAME)
avac WelcomeToBridgeLabz.java
rocess started (PID=12116) >>>
<<< Process finished (PID=12116). (Exit code 0)
================ READY ================
ava $(NAME_PART)
ava WelcomeToBridgeLabz
rocess started (PID=8768) >>>
Welcome to BridgeLabz!
<<< Process finished (PID=8768). (Exit code 0)
```

2. Add Two Numbers

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

change.log | AddTwoNumbers.java

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

        int num1 = sc.nextInt();
        int num2 = sc.nextInt();
        int add = num1 + num2;
        System.out.println("Sum of " + num1 + " and " + num2 + " is " + add);

    }
}
```

```
NppExec Console
cd $(CURRENT_DIRECTORY)
CD: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
Current directory: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
================ READY ================
javac $(FILE_NAME)
javac AddTwoNumbers.java
Process started (PID=17136) >>>
javac $(FILE_NAME)<<< Process finished (PID=17136). (Exit code 0)
================ READY ================
java $(NAME_PART)
java AddTwoNumbers
Process started (PID=8656) >>>
8 4
Sum of 8 and 4 is 12
<<< Process finished (PID=8656). (Exit code 0)
================ READY ================
```

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`.

change.log | CelsiusToFahrenheit.java

```java
import java.util.*;
public class CelsiusToFahrenheit{
    public static void main(String args[]){
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter temperature in Celsius: ");
        double c = scanner.nextDouble();

        double f = (c * 9/5) + 32;

        System.out.println(c + " degree C is equal to " + f + " degree F");
    }
}
```

NppExec Console

```
cd $(CURRENT_DIRECTORY)
CD: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
Current directory: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
================ READY ================
javac $(FILE_NAME)
javac CelsiusToFahrenheit.java
Process started (PID=14056) >>>
<<< Process finished (PID=14056). (Exit code 0)
================ READY ================
java $(NAME_PART)
java CelsiusToFahrenheit
Process started (PID=19152) >>>
Enter temperature in Celsius: 30.8
30.8 degree C is equal to 87.44 degree F
<<< Process finished (PID=19152). (Exit code 0)
================ READY ================
```

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`.

```java
import java.util.*;

public class AreaOfCircle {
    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);


        System.out.print("Enter the radius of the circle: ");
        double radius = scanner.nextDouble();

        double area = Math.PI * Math.pow(radius, 2);


        System.out.printf("The area of the circle with radius %.2f is: %.2f", radius, area);
    }
}
```

```
NppExec Console
cd $(CURRENT_DIRECTORY)
CD: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
Current directory: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
================ READY ================
javac $(FILE_NAME)
javac AreaOfCircle.java
Process started (PID=17772) >>>
<<< Process finished (PID=17772). (Exit code 0)
================ READY ================
java $(NAME_PART)
java AreaOfCircle
Process started (PID=13964) >>>
Enter the radius of the circle: 7
The area of the circle with radius 7.00 is: 153.94<<< Process finished (PID=13964). (Exit code 0)
================ READY ================
```

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`.

```java
import java.util.*;

public class CylinderVolume {
    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter the radius of the cylinder: ");
        double radius = scanner.nextDouble();

        System.out.print("Enter the height of the cylinder: ");
        double height = scanner.nextDouble();

        double volume = Math.PI * Math.pow(radius, 2) * height;

        System.out.printf("The volume of the cylinder with radius %.2f and height %.2f is: %.2f", radius, height, volume);
    }
}
```

```
NppExec Console
cd $(CURRENT_DIRECTORY)
CD: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
Current directory: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
================ READY ================
javac $(FILE_NAME)
javac CylinderVolume.java
Process started (PID=12632) >>>
cd $(CURRENT_DIRECTORY)<<< Process finished (PID=12632). (Exit code 0)
================ READY ================
java $(NAME_PART)
java CylinderVolume
Process started (PID=780) >>>
Enter the radius of the cylinder: 5
Enter the height of the cylinder: 4
The volume of the cylinder with radius 5.00 and height 4.00 is: 314.16<<< Process finished (PID=780). (Exit code 0)
================ READY ================
```

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.

```java
import java.util.*;

public class SimpleInterest {
    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter the Principal amount: ");
        double principal = scanner.nextDouble();


        System.out.print("Enter the Rate of interest: ");
        double rate = scanner.nextDouble();

        System.out.print("Enter the Time period (in years): ");
        double time = scanner.nextDouble();

        double interest = (principal * rate * time) / 100;
        System.out.printf("The Simple Interest is: %.2f%n", interest);
    }
}
```

```
NppExec Console
cd $(CURRENT_DIRECTORY)
CD: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
Current directory: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
================ READY ================
javac $(FILE_NAME)
javac SimpleInterest.java
Process started (PID=3360) >>>
<<< Process finished (PID=3360). (Exit code 0)
================ READY ================
java $(NAME_PART)
java SimpleInterest
Process started (PID=9620) >>>
Enter the Principal amount: 1000
Enter the Rate of interest: 3
Enter the Time period (in years): 2
The Simple Interest is: 60.00
<<< Process finished (PID=9620). (Exit code 0)
================ READY ================
```

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)`.

```java
import java.util.Scanner;

public class RectanglePerimeter {
    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);


        System.out.print("Enter the length of the rectangle: ");
        int length = scanner.nextInt();


        System.out.print("Enter the width of the rectangle: ");
        int width = scanner.nextInt();

        // Calculate the perimeter of the rectangle
        int perimeter = 2 * (length + width);

        // Display the result
        System.out.println("The perimeter of the rectangle is: " + perimeter);
    }
}
```

```
NppExec Console
cd $(CURRENT_DIRECTORY)
CD: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
Current directory: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
================ READY ================
javac $(FILE_NAME)
javac RectanglePerimeter.java
Process started (PID=2744) >>>
javac $(FILE_NAME)<<< Process finished (PID=2744). (Exit code 0)
================ READY ================
java $(NAME_PART)
java RectanglePerimeter
Process started (PID=688) >>>
Enter the length of the rectangle: 4
Enter the width of the rectangle: 3
The perimeter of the rectangle is: 14
<<< Process finished (PID=688). (Exit code 0)
================ READY ================
```

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).

```java
import java.util.Scanner;

public class Power {
    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        double base = scanner.nextDouble();


        System.out.print("Enter the exponent: ");
        double exponent = scanner.nextDouble();

        double result = Math.pow(base, exponent);

        System.out.println(base + " raised to the power of " + exponent + " is: " + result);
    }
}
```

```
NppExec Console
cd $(CURRENT_DIRECTORY)
CD: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
Current directory: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
================ READY ================
javac $(FILE_NAME)
javac Power.java
Process started (PID=11732) >>>
<<< Process finished (PID=11732). (Exit code 0)
================ READY ================
java $(NAME_PART)
java Power
Process started (PID=556) >>>
4
Enter the exponent: 2
4.0 raised to the power of 2.0 is: 16.0
<<< Process finished (PID=556). (Exit code 0)
================ READY ================
```

4. Calculate Average of Three Numbers

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

```java
import java.util.*;

public class Average {
    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter the first number: ");
        double num1 = scanner.nextDouble();

        System.out.print("Enter the second number: ");
        double num2 = scanner.nextDouble();

        System.out.print("Enter the third number: ");
        double num3 = scanner.nextDouble();

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

        System.out.println("The average of the three numbers is: " + average);
    }
}
```

```
NppExec Console
cd $(CURRENT_DIRECTORY)
CD: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
Current directory: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
================ READY ================
javac $(FILE_NAME)
javac Average.java
Process started (PID=15928) >>>
javac $(FILE_NAME)<<< Process finished (PID=15928). (Exit code 0)
================ READY ================
java $(NAME_PART)
java Average
Process started (PID=12928) >>>
Enter the first number: 33
Enter the second number: 44
Enter the third number: 55
The average of the three numbers is: 44.0
<<< Process finished (PID=12928). (Exit code 0)
================ READY ================
```

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`.

```java
import java.util.Scanner;

public class KilosToMiles {
    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter the distance in kilometers: ");
        double kilometers = scanner.nextDouble();

        double miles = kilometers * 0.621371;

        System.out.println(kilometers + " kilometers is equal to " + miles + " miles.");
    }
}
```

```
NppExec Console
cd $(CURRENT_DIRECTORY)
CD: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
Current directory: C:\Users\nomic\OneDrive\Desktop\Documents\CapgeminiTraining\Practice-Problem\19-jan assign
================ READY ================
javac $(FILE_NAME)
javac KilosToMiles.java
Process started (PID=8288) >>>
<<< Process finished (PID=8288). (Exit code 0)
================ READY ================
java $(NAME_PART)
java KilosToMiles
Process started (PID=7768) >>>
Enter the distance in kilometers: 3
3.0 kilometers is equal to 1.8641130000000001 miles.
<<< Process finished (PID=7768). (Exit code 0)
================ READY ================
```