

# Programming I

## Lab 2

1. Write a program that converts degrees Fahrenheit to degrees Celcius. The program prompts the user to enter a temperature in Fahrenheit, which is stored in a variable of type `double`. The program then applies the formula for conversion, and then finally displays the result. Make sure that for all the output statements you display a full message, not just the variable. The formula is as follows:

```
celcius = (5.0 / 9.0) * (fahrenheit - 32)
```

2. Write a program that computes the average of 5 real values (`double`) entered by the user. Use a `Scanner` object with the operation `nextDouble` to obtain the values and store each in a separate variable. The average is computed by summing the values and dividing the result by 5. Your program should finally display the values entered as well as the average. Here's a sample output:

```
Enter the first number: 1.8
Enter the second number: 1.9
Enter the third number: 2.0
Enter the fourth number: 2.1
Enter the fifth number: 2.2
The average of 1.8, 1.9, 2.0, 2.1, and 2.2 is 2.0
```

3. Write a program that computes the radius of a sphere given its volume (volume is input by the user). This can be done by solving for the radius  $r$  in the formula  $volume = 4/3\pi r^3$  (this requires the use of the `Math.pow` operation).
- 4\*\* Write a program that prompts the user to enter an integer between 0 and 1000. The program sums up the digits and then display the result. For instance, if the user enters 483, the program should output 15. Hint: the last digit of a number can be obtained by applying modulus 10 to the number.

Submit 4 separate java files to your folder on the Labdata network drive.