
HW 02: Tip Calculator + Tense Corrector

Release date: January 21st, 2018

Due date: January 28th, 2018 by 11:59pm

Goals:

- Familiarity with primitive data types
 - Perform arithmetic operations on numeric data
 - Manipulate strings using the Java String library
 - Getting inputs and printing outputs using **Scanner**.
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Prerequisites:

- Knowledge on string manipulation.
 - Knowledge on getting inputs and printing outputs using **Scanner**.
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Description:

For your second homework assignment you are required to write two separate Java programs, **TipCalculator.java** and **TenseCorrector.java**, that will prompt users to provide certain information which the program will process and produce an output according to its functions respectively.

1. **Task 1:** Tip Calculator
 2. **Task 2:** Tense Corrector
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Task 1: Tip Calculator

This program uses the Scanner class to prompt users for an amount to be paid by the user in US dollars (a **double**) and the percentage of tip the user is willing to give (an **int**). The base amount (a **double**), tip amount alone (a **double**), and the total amount to be paid (a **double**) should then be produced as an output on the console as shown on the example below. It is important to follow the format closely.

Example/Demonstration:

```
Price ($) : 200
Tip Percentage (%) : 15

Price Without Tip ($) : 200.00
Tip Amount ($) : 30.00
Total Amount ($) : 230.00
```

Task 2: Tense Corrector

This program uses the Scanner class to prompt users for a sentence with possible grammatical errors in it (a String). The program will then manipulate the given string by replacing all the words in the table below into their past tense. You will only be checked for the successful conversion of these given words. The “corrected” sentence (a String) will then be displayed on the console in the next line as shown below.

"Incorrect" Words	"Corrected" Words
Is	Was
Am	Was
Are	Were
Do	Did

Example/Demonstration:

Original Sentence: It is a holiday

Corrected Sentence: It was a holiday(Corrected)

Original Sentence: I am confused but they are not

Corrected Sentence: I was confused but they were not(Corrected)

Original Sentence: We do not understand

Corrected Sentence: We did not understand(Corrected)

Turning in Your Work

Submit your files, **TipCalculator.java** and **TenseCorrector.java**, to Vocareum through Blackboard. Keep in mind that only your last submission will be considered.

Grading Rubric — 100 points

- Tip Calculator — 50 points total

- (10 points) Prompts the user for price amount (a double)
- (10 points) Prompts the user for tip percentage (an int)
- (10 points) Prints the correct amount for price amount(a double) in the correct format
- (10 points) Prints the correct amount for tip amount(a double) in the correct format
- (10 points) Prints the correct amount for total amount(a double) in the correct format

- Tense Calculator — 50 points total

- (10 points) Prompts the user for original sentence (a String)
- (10 points) Successfully concatenates corrected sentence with "(Corrected)" and prints them in the correct format
- (30 points) Successfully corrects the words "Is", "Am", "Are" and "Do" and prints corrected sentence in the correct format

