

# NTOU Java Programming

## Exercise 8

Spring 2025



# Exercise-Exception<sub>1</sub>

2

- The FuelCalculator application consists of four classes:
  - ▣ FuelRecord.java, GasStationBrand.java, FuelCalculator.java, and FuelCalculatorTest.java
- This application can calculate the unit price of gasoline per liter. The expected results are as follows:

Please enter the cost of gasoline: 1200

Please enter the liters of gasoline: 42.3

Please enter the brand (1: CPC, 2: FPCC, 3: Costco): 2

Cost per liter of fuel for Formosa Petrochemical Corporation:  
 $1200 / 42.30 = 28.37$

# Exercise-Exception<sub>2</sub>

3

- Please understand the usage of the four classes first, and try to input different data for testing.
  - ▣ You will find that the application is very fragile, and you will find that many exceptions are not properly caught.
  - ▣ Please refer to `ex8-original-results.txt`.

# Exercise-Exception<sub>2</sub>

4

- Please modify the *calculateFuelUnitPrice()* method of the *FuelCalculator* class to make it fault-tolerant:
  - ▣ Fault tolerance can only be achieved using the exception handling mechanism.
  - ▣ Catch at least four exceptions that may occur, and clearly print the exception type with a clear text message and allow the user to re-input data.
  - ▣ Regardless of whether an exception occurs, please print the message "Thank you for the test!". (Use “finally”)
  - ▣ Please refer to ex8-expected-results.txt (only partial results).

# Requirements

5

- The naming should conform to the CamelCase style.
- “Package” is required: `ntou.cs.java2025`.
- Please submit files including `.java` files and `.class` files (upload them to TronClass).
- Code that fails to compile or execute is not accepted.