cis112-2025-1-e2Midterm2-Q1-g2: FIFO Stock

v2025-04-27

Introduction

Consider an inventory of some item, such as shares in stock exchange or apples.

- One *buys* different amounts at different prices at differet times.

- Similarly, one *sells* different amounts at different prices at differet times.

- The *total gain* is the profit/lost obtained at a given time.

There are many ways to calculate total gain. One of them is **FIFO**. Assume that the system is using *FIFO*. That is, one sells the oldest item first.

Example

1. Buy 4 items at a price of $5. Stock: 4 @$5. TotalGain = $0.

2. Sell 3 items at a price of $7. Stock: 1 @$5. TotalGain = 0 + 3 (7 - 5) = $6.

3. Buy 10 items at a price of $6. Stock: 1 @$5 + 10 @$6. TotalGain = $6.

4. Sell 3 items at a price of $8. Stock: 8 @$6. Total gain = 6 + 1 (8 - 5) + 2 (8 - 6) = 13.

ToDo

D0. Common material

Consider `cis000_common` package.

1. Update `StudentInfo` with your info.
2. Read `ExamInLab-forStudents.pdf` carefully.

D1. Stock

1. Complete `StockFIFO`.

2. You can use `StockFIFO_Test` during your development.

3. Evaluate your code with `StockFIFO_jUnit`.

Warning. Do not change `StockFIFO_jUnit` .