

CTEC1641 Enterprise Computing II 2007W

PRACTICE FINAL EXAM

Vending Machine Application

A standalone Java application that simulates a vending machine has been provided. The machine accepts nickels (5¢), dimes (10¢), quarters (25¢), loonies (\$1.00), and twonies (\$2.00). The products that it can dispense and their respective prices are currently hard-coded in `VendingMachine.java` and are re-initialized each time the vending machine starts up.

The application prompts the user to deposit coins and then to select the commodity. It checks to see that the user has deposited enough money. As each user deposits coins, the total amount deposited is displayed in dollars with the heading "Credit".

If the machine is out of a particular commodity, the message "Make Another Selection" is shown to the user.

The program calculates the correct change and displays the number of quarters, dimes, and nickels returned as change (loonies and twonies are not returned as change).

The amount of nickels, dimes, and quarters available as change is also hard-coded in `VendingMachine.java`, as is the total amount of money deposited into the machine. (Deposited coins are not recycled as change). When the machine runs out of change, the user is prompted to "Use Exact Change".

WHAT YOU HAVE TO DO:

Currently the items (type and amount) and revenue are hard-coded in `VendingMachine.java`, and are reset every time the application starts.

Modify the application to load this information from a server application when it starts up, i.e., use the server to set `itsItem`.

Each time a transaction is completed, the vending machine should notify the server with the item that was sold. The server will keep track of quantity for each item, and total revenue.

You can choose to do this either using **stream sockets** or **remote method invocation (RMI)**.

The hostname and/or socket port of the server should be passed from the command line. Catch all exceptions properly (i.e., don't just discard them). If the vending machine (client) cannot connect to its server, exit with an error message.