Worksheet Three Extra Exercises

"Ford!", Arthur said, "There's an infinite number of monkeys outside who want to talk to us about this script for Hamlet they've worked out".
Douglas Adams, The Hitch Hikers Guide to the Galaxy 1979

Unit Learning Outcomes Addressed by this worksheet: 1 & 2

All of the Java code for this worksheet should be placed in the P02 directory that you created lasted week.

Exercise Three (Another algorithm with sub modules)
Design an algorithm which will:

- Input the cost of a product and the amount the customer has tendered for payment.
- If both the costs and payment are valid (think about what the criteria for valid would be) then the algorithm should:
    - Calculate the amount of change required.
    - Determine the notes and coins to be given to the customer.
    - Output both to the user.

You will need to think carefully about your choice of data types. You need to ensure that the money amounts are kept to a precision of 2 decimal places. Also the price of products isn't necessarily in increments of 5c so you also need to handle that in the part of your algorithm which species the change. The normal practice is to round to the nearest 5 cents (e.g. $12.68 becomes $12.70 and $12.62 becomes $12.60). Make good use of sub modules and think carefully about your algorithm as it seems straight forward but can be a bit tricky.

Exercise Four(Another Java implementation)
Convert your pseudo code design into a complete Java application.