Assignment 1 (D&HD) – Requirements & Modelling

This part of Assignment 1 is for students targeting at grades of Distinction and High Distinction.

If you are targeting at the grade of D or HD in COS80022, you need to complete the following two tasks in addition to those in Assignment 1 (P&C).

Task A: Review of "MyBank" Functional Specification (7 points)

Suppose that you are working in a team testing a new "over the counter" banking application for MyBank, a large Australian bank. A draft version of the Functional Specification has been completed by the business analysts. You are asked to perform an informal review on the specification.

Your review is particularly focused on answering the question "is the document internally consistent?" This consists of checking the document for the following:

1. Is it ambiguous? If not, please list the relevant items and briefly explain why.
2. Is it consistent within itself? If not, please list the relevant items and briefly explain why.
3. Is it complete? If not, please list the relevant items and briefly explain why.
4. Is it free of errors? If not, please list the relevant items and briefly explain why.
5. Is it feasible? If not, please list the relevant items and briefly explain why.
6. Is it testable? If not, please list the relevant items and briefly explain why.

Specifically, you are required to:

- Download the file "SQT Assignment1-D&HD TaskA-Spec.pdf", which contains the draft version of the MyBank Functional Specification
- Read and review this draft version of the MyBank Functional Specification
- Find as many issues as possible within this document relating to the six 'Is it?' points listed above
- Record all found issues in your report

Task B: State machine diagram (3 points)

This task models the flow of a Vending Machine transaction for purchasing a drink, involving the "Customer," the "Vending Machine," and the "Bank." The customer approaches the Vending Machine and selects the desired drink. To initiate the transaction, the customer inserts their card into the Vending Machine. The Vending Machine prompts the customer to enter their PIN, which is then verified for correctness by sending the PIN information to the Bank for validation. Once the bank validates the PIN and confirms that the card is legitimate and has sufficient funds, the Vending Machine proceeds to check if the payment provided by the customer is enough to cover the cost of the chosen drink. If the payment is sufficient, the transaction is accepted, and the Vending Machine dispenses the drink to the customer. However, if the payment is insufficient, the transaction is not accepted, and the Vending Machine will not dispense the drink. In both cases, the Vending Machine always returns the customer's change (if applicable) and completes the transaction.

You are required to design and plot the state machine diagram for the Vending Machine transaction. Your diagram will be assessed based on:

- Appropriate identification and use of states, transitions, etc.
- Appropriate use of UML notation

Submission

This is an **individual** assignment, which totals 10 points, 10% of the whole assessment of this unit. This assignment is required to students who are targeting at the grade of D or HD in COS80022. You are required to complete both two tasks and compose your answers into one single document in .doc, .docx, or .pdf file.

Every student should submit his/her own work by **23.59pm Sunday the 14th of April 2024**. The assignment should be submitted via the assessment submission system in Canvas which integrates with the Turnitin plagiarism checking service.

You will be penalised 10% of the assessment's worth for each calendar day the task is late, up to a maximum of 5 days. After 5 calendar days, a zero result will be recorded. Students with special circumstances (acute illness, loss or bereavement, hardship or trauma) may apply for an extension up to five days.