Assignment 2 (D&HD) – Testing

This part of Assignment 2 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 three tasks in addition to those in Assignment 2 (P&C).

Task A: Review of requirements from a tester's perspective (8 points)

The requirements for the in-branch bank system are being reviewed. You are asked to review the document from the perspective of a tester.

Sub-task A.1: Requirements review (3 points)

Review the requirements given in Appendix, from a tester's perspective using the following questions:

Is information given for all inputs? If not, please list the relevant items and briefly explain why.	
Are any inputs missing? If not, please list the relevant items and briefly explain why.	
Is information appropriate to section? If not, please list the relevant items and briefly explain why.	
Is any information ambiguous? If not, please list the relevant items and briefly explain why.	

Sub-task A.2: Boundary testing (3 points)

Read the following explanation of boundary testing. Use this explanation to produce boundary tests using the requirement under review. Do this for ClassicSaver deposits, Premium Saver deposits and number of supplementary accountholders.

Boundary testing explanation

Determine all ranges in requirement Find boundary values for each range

- The smallest value in the range
- The value just below the smallest value
- The largest value in the range
- The value just about the largest value

Write the expected outcome for each of the four boundaries

Boundary testing working

Classic Saver deposit

Input	Output

Premium Saver deposit

Input	Output

Supplementary account holders

Input	Output

Sub-task A.3: Review against boundary testing question (2 points)

Review the requirement against the following boundary testing specific questions

Can boundary values be fully defined? If not, please list the relevant items and briefly explain why.	
Are outputs defined for all boundaries? If not, please list the relevant items and briefly explain why.	
Do any boundaries have more than one output defined? If not, please list the relevant items and briefly explain why.	

Task B: Decision table testing (3 points)

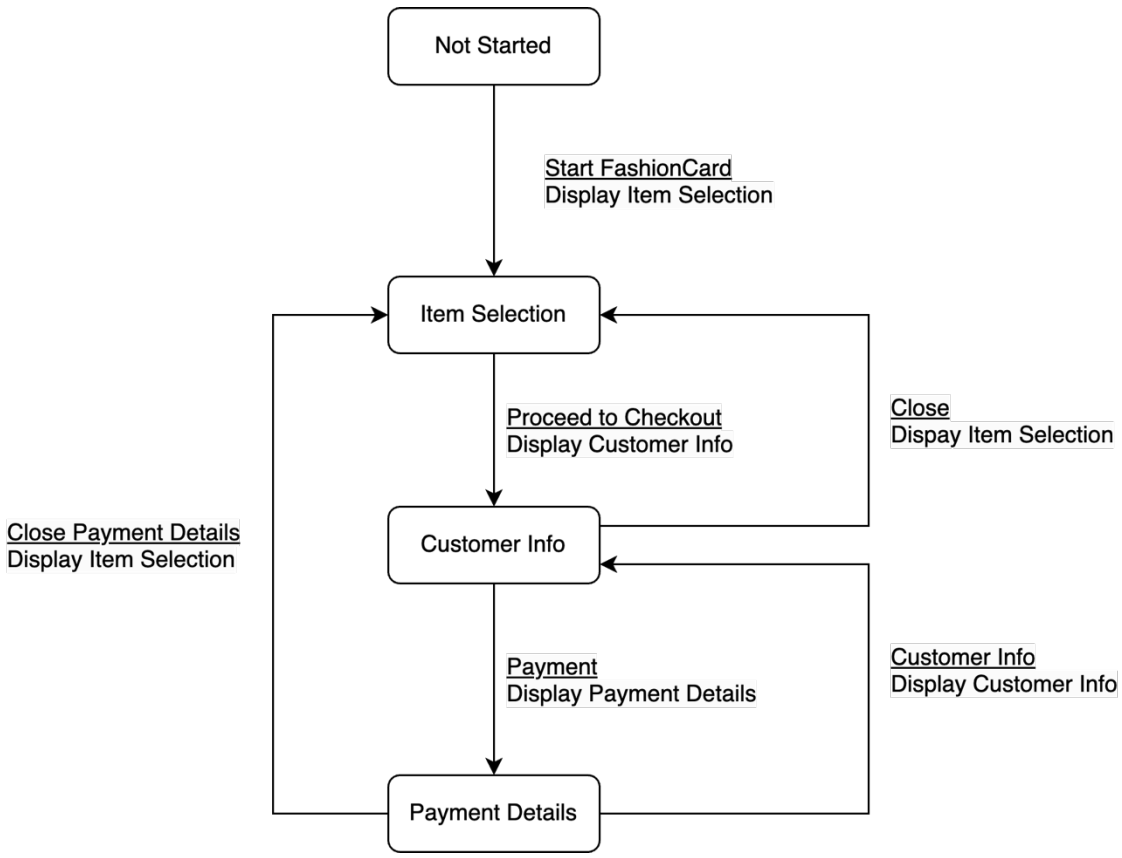
In the "FashionShop" sales system a customer can be eligible for a number of discounts based on how much they purchase and how they make the purchase.

If the user pays with a FashionCard card, they are entitled to a 6% discount on the total cost of their goods. If the total cost of goods is greater than $1000 they are entitled to a discount of 4%. A customer paying by FashionCard for goods where the total cost is over $1000 is entitled to both discounts (10%). Any customer whose total cost is less than or equal to $1000 and is not paying by FashionCard is not entitled to any discount.

You have been asked to create a set of tests conditions from this part of the specification, use a decision table to create a set of test cases.

Task C: State transition testing (4 points)

In the FashionShop system described in the above Task B, the following state machine diagram has been created with each event and action marked:



Sub-task C.1: Single state transitions (2 points)

Complete the set of tests that will exercise all valid single transitions:

	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6
Start State						
Event						
Action						
End State						

Sub-task C.2: Invalid tests (2 points)

Create the state table and identify the invalid tests

	Events						
		Start FashionShop	**Proceed to Checkout**	**Payment**	**Close Payment Details**	**Close**	**Customer Info**
Start States	**Not Started**						
	Item Selection						
	Customer Info						
	Payment Details						

Submission

This is an **individual** assignment, which totals 15 points, 15% 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 all three 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 26th of May 2024**. The assignment should be submitted via the assessment submission system in Canvas which integrates with the Turnitin plagiarism checking service. Also provided in the Canvas' submission system is a rubric detailing the assessment criteria for each of the above tasks.

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.

Appendix: Requirement for Task A

1. There are two different types of account that can be created, each with a unique identifier code:

Account Name	Identifier Code
Classic Saver	9970
Premium Saver	9960

Once the type of account has been selected, the system generates the unique account number for the customer. The account number is in the format NNN- MMMMMM where the first part (NNN) is an identifier of the type of account, and the second (MMMMMM) is the account number itself.

2. The accounts of the different types can be linked to allow the customer to perform additional actions across them.

3. An overdraft facility can be set up.

4. Bank staff get a 10% bonus for selling over 15 insurance products per month

5. Each account type has certain fulfilment criteria, which must be met before an account, can be created

6. Only one of each account type can be created per customer.

7. Each customer can have a maximum of one of each account type set up concurrently.

8. A customer can have between zero and three supplementary account holders set up, per account type.

9. A minimum deposit amount is required to open an account. The minimum amount is dependent upon the account type selected. All accounts must have a minimum deposit at least $1000. The following table illustrates the minimum amounts to be deposited by account type.

Account Type	Minimum Deposit	Maximum Deposit
Classic Saver	$500.00	$999,999.99
Premium Saver	$2,500.00	$999,999.99