

# Engineering Assignment Coversheet

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**Group Code (if applicable):**  
**Group 6**

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- Must keep a full copy of your submission for this assignment
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- Must NOT use binders or plastic folders except for large assignments

<b>Assignment Title:</b>	Assignment 2A: Group Assignment – Report
<b>Subject Number:</b>	ISYS10001
<b>Subject Name:</b>	Foundations of Information Systems
<b>Student Name:</b>	Jarod Ang, Gabriella Nadia Suwanda, Shermaine Shuyu Toh, James La Fontaine, Junyi Wei
<b>Lecturer/Tutor:</b>	Libo and Charlynn
<b>Due Date:</b>	23/10/2020, 23:59

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Has an extension been granted? Yes ☒ No ☐ (circle)

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For the purposes of assessment, I give the assessor of this assignment the permission to:

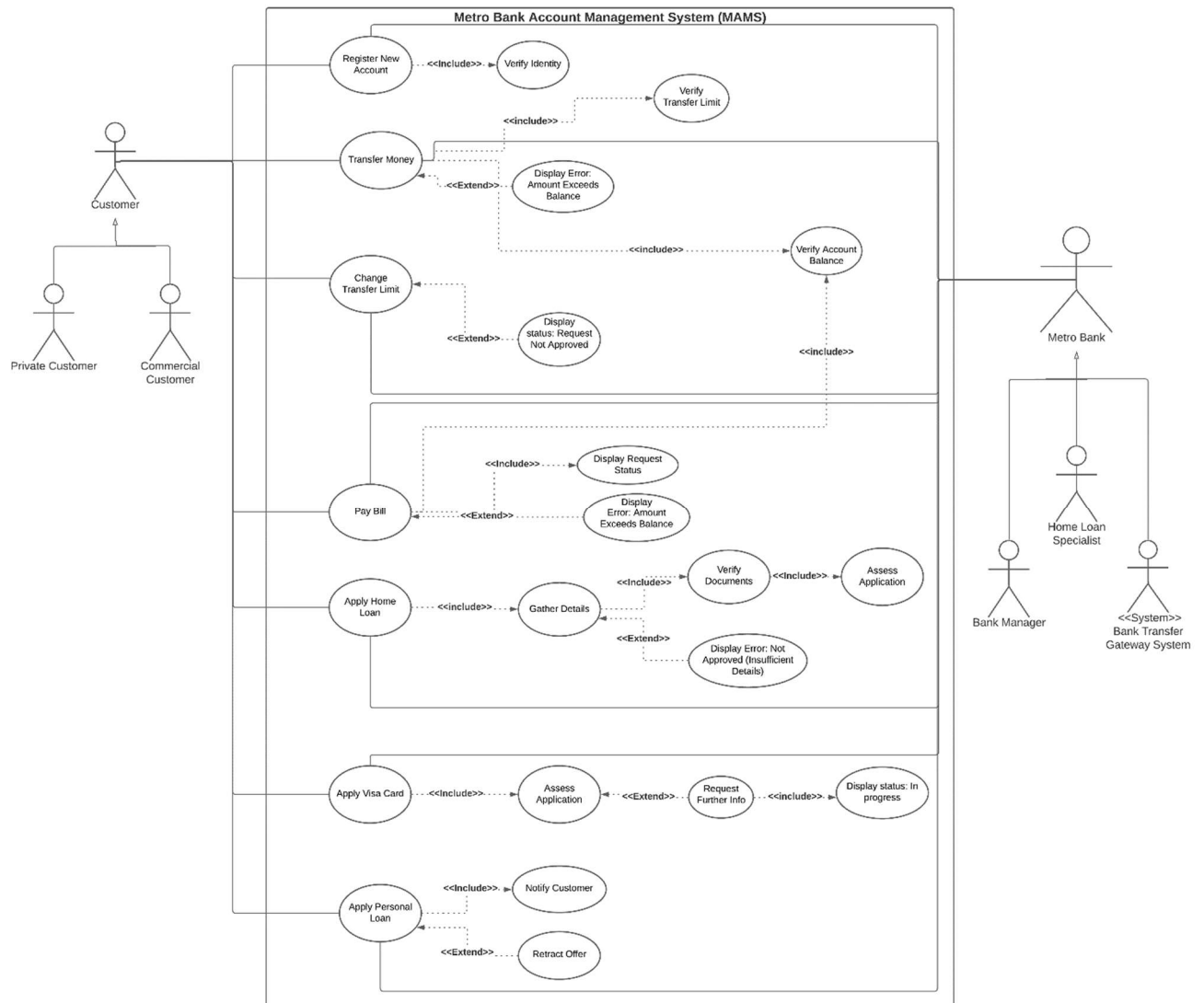
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Student signature ..... J.A ..... Date ..... 20/10/2020 .....

## 1. Assumptions (if any)

Customer has registered for an account (exception: UC1)

## 2. Use Case Diagram of the MAMS



**\*Link to Diagram\*:**

<https://lucid.app/invitations/accept/7a3eaabf-ae7f-498a-8e78-83face18f4f0>.

### 3. Use Case Description

#### 3.1: Registration

Use Case UC1: Register New Account				
Primary Actor:	Customer (Private and Commercial)			
Stakeholders:	<ul style="list-style-type: none"><li>• Private Customer</li><li>• Commercial Customer</li><li>• Metro Bank</li><li>• Australian Business Register</li></ul>			
Pre-conditions:	<ul style="list-style-type: none"><li>• Customer has started up the Metro Bank Account Management System through the website or the mobile phone app.</li></ul>			
Post-conditions:	<ul style="list-style-type: none"><li>• Customer has registered an account. Account details are saved in the system. Confirmation email with user login and password is sent to the registered customer. Customer can now perform new actions once they have logged into their account.</li></ul>			
Main Success Scenario:	Actor:		System:	
	1. Customer goes to ‘register account’			
			2. System requests to know whether customer is private or commercial	
	3. Customer enters whether they are a commercial or private customer			
			4. System prompts for customer details and login details	
	(System repeats step 4 until the customer details and user login are verified)			
			5. System indicates successful account registration and sends a confirmation email to the customer with the user login and password.	
	6. Customer can now log in and perform account related actions.			
Extensions:	4a. Private customer			
	1. Customer enters personal details and a user login and password			
			2. System verifies that the customer’s details are valid and that the user login is available for use	
				2a. System has received an unavailable user login or invalid details
				Actor:                      System:

				1. System indicates to user that user login is invalid, or details are invalid and prompts customer to try again
	(Repeat steps 1 and 2 until valid details and an available user login are entered)			
	3. Customer confirms registration			
	4b. Commercial customer			
	1. Customer enters commercial details, an ABN and a user login and password			
		2. System verifies that the customer’s details are valid, that the ABN is valid via the Australian Business Register, and verifies that the user login is available		
			2a. System has received an unavailable user login, or invalid details / invalid ABN	
			Actor:	System:
				1. System indicates to customer that user login is invalid, or details / ABN are invalid and prompts customer to try again
	(Repeat steps 1 and 2 until valid details and ABN, and an available user login are entered)			
	3. Customer confirms registration			

### 3.2: Transfer Money

Use Case UC2: Transfer Money		
<b>Primary Actor:</b>	<b>Customer (Private and Commercial)</b>	
<b>Stakeholders:</b>	<ul style="list-style-type: none"> <li>• <b>Private Customer</b></li> <li>• <b>Commercial Customer</b></li> <li>• <b>Metro Bank (MAMS, bank transfer gateway system)</b></li> </ul>	
<b>Pre-conditions:</b>	<ul style="list-style-type: none"> <li>• Customer is identified and authenticated into MAMS.</li> </ul>	
<b>Post-conditions:</b>	<ul style="list-style-type: none"> <li>• Transfer request has now been validated and processed. Amount transferred has been deducted from customer's account.</li> </ul>	
<b>Main Success Scenario:</b>	<b>Actor:</b>	<b>System:</b>
	1. Customer logs into MAMS with user login and password	
		2. System validates customer's details
	3. Customer submits transfer request, specifying amount and bank account number	
		4. System receives request, validates and processes it. It updates transfer request status to "Processed". System deducts customer's account by amount transferred and updates account balance. System sends out an automated receipt to customer's email/phone number
	5. Customer receives automated receipt	
<b>Extensions:</b>	<i>3a. Invalid user login (not found in system):</i>	
		1. System signals error, rejects entry and request customer to try again
	<i>4a. Amount exceeds balance/transfer limit (insufficient funds)</i>	
		2. System signals error and updates transfer request status to "Not Processed". It notifies customer of insufficient balance or requests customer to increase transfer limit

### 3.3: Change Transfer Limit

Use Case UC3: Change Transfer Limit		
<b>Primary Actor:</b>	<b>Customer (Private and Commercial)</b>	
<b>Stakeholders:</b>	<ul style="list-style-type: none"> <li>• <b>Private Customer</b></li> <li>• <b>Commercial Customer</b></li> <li>• <b>Metro Bank (MAMS, bank manager)</b></li> </ul>	
<b>Pre-conditions:</b>	<ul style="list-style-type: none"> <li>• Customer is identified and authenticated into MAMS.</li> </ul>	
<b>Post-conditions:</b>	<ul style="list-style-type: none"> <li>• Request to adjust transfer limit has been approved. New transfer limit has been updated in customer's account.</li> </ul>	
<b>Main Success Scenario:</b>	<b>Actor:</b>	<b>System:</b>
	1. Customer logs into MAMS with user login and password	
		3. System validates customer's details
	4. Customer submits a request to change transfer limit	
		7. System assesses and approves request. It updates the transfer limit in customer's account. System also updates the application status to "Approved"
<b>Extensions:</b>	<i>2a. Invalid user login (not found in system):</i>	
		1. System signals error, rejects entry and request customer to try again
	<i>4a. Suspicious activity detected</i>	
		2. System signals error. System requests customer to verify his/herself. It also updates the application status to "Not Approved"

### 3.4: Pay Bills

Use Case UC4: Pay bill		
<b>Primary Actor:</b>	<b>Customer (Private)</b>	
<b>Stakeholders:</b>	<ul style="list-style-type: none"> <li>• <b>Private Customer</b></li> <li>• <b>Metro Bank (Bank Transfer Gateway System)</b></li> </ul>	
<b>Pre-conditions:</b>	<ul style="list-style-type: none"> <li>• Customer is identified and authenticated into MAMS.</li> <li>• Customer makes a request for paying bills.</li> </ul>	
<b>Post-conditions:</b>	<ul style="list-style-type: none"> <li>• The bills will be processed.</li> <li>• The customer will see the billing progress status as either “In Progress” or “Processed”.</li> </ul>	
<b>Main Success Scenario:</b>	<b>Actor:</b>	<b>System:</b>
	1. The user will log into MAMS with user login and password, specifying the bill by inputting the biller code and reference number	
		2. System validates customer’s details
	3. . The customer then input an amount to be paid and submit the payment	
		4. The system will check if the amount of money exceeds the amount balance of the customer. System receives payment request and processes it. It updates payment request status to “Processed”. System sends out an automated receipt to customer’s email/phone number
	5. Customer receives automated receipt	
<b>Extensions:</b>	<i>2a. Invalid user login (not found in system):</i>	
		1. System signals error, rejects entry and request customer to try again
	<i>4a. Amount exceeds balance (Insufficient funds)</i>	
		2. System signals error and notifies customer of insufficient balance

### 3.5: Apply for Home Loan

Use Case UC5: Apply for Home Loan		
<b>Primary Actor:</b>	<b>Customer (Private)</b>	
<b>Stakeholders:</b>	<ul style="list-style-type: none"> <li>• <b>Private Customer</b></li> <li>• <b>Metro Bank (MAMS, Home Loan Specialist, Bank Transfer Gateway System)</b></li> </ul>	
<b>Pre-conditions:</b>	<ul style="list-style-type: none"> <li>• Customer is identified and authenticated into MAMS.</li> <li>• Property valuation is comparable to customer's financial state</li> <li>• Customer has a good credit score</li> </ul>	
<b>Post-conditions:</b>	<ul style="list-style-type: none"> <li>• Home Loan application has been reviewed and approved. Settlement is now arranged by the home loan specialist.</li> </ul>	
<b>Main Success Scenario:</b>	<b>Actor:</b>	<b>System:</b>
	1. Customer logs into MAMS with user login and password	
		2. System validates customer's details
	3. Customer submits home loan application, specifying financial, property and loan details	
		4. System receives request, information is sent to a home loan specialist to be reviewed
	5. Customer is contacted by a home loan specialist to discuss more details about financial needs, expenses, assets and employment details	
		6. System assesses borrowing power of customer using internal guideline through data input by home loan specialist
	7. Customer is notified through that the loan application is approved in principle through MAMMS and SMS and uploads documents online	
		8. System checks whether uploaded documents fulfill the requirements (less than 5 MB and description provided)
	9. Customer is notified that valuation is completed and goes through credit checking	



		10. System receives request, processes credit checking and sends information for final review to bank manager
	11. Customer is notified that the loan has been approved through MAMS and SMS	
		12. System updates loan application status to “Approved”.
	13. Customer receives Home Loan Contract Pack by mail and should return the signed contract through mail for the settlement to be processed by the loan specialist	
<b>Extensions:</b>	<i>2a. Invalid user login ((not found in system):</i>	
		1. System signals error, rejects entry and requests customer to try again
	<i>6a. Insufficient borrowing power</i>	
		2. System updates transfer request status to “Not Approved”. It notifies customer of the application outcome.
	<i>8a. Uploaded documents does not fulfill requirements</i>	
		3. System rejects file upload and will prompt customer to re-upload new files with certain specifications
	<i>10a. Bad credit score during credit check</i>	
		4. System updates transfer request status to “Not Approved”. It notifies customer of the application outcome.

### 3.6: Apply for VISA Card

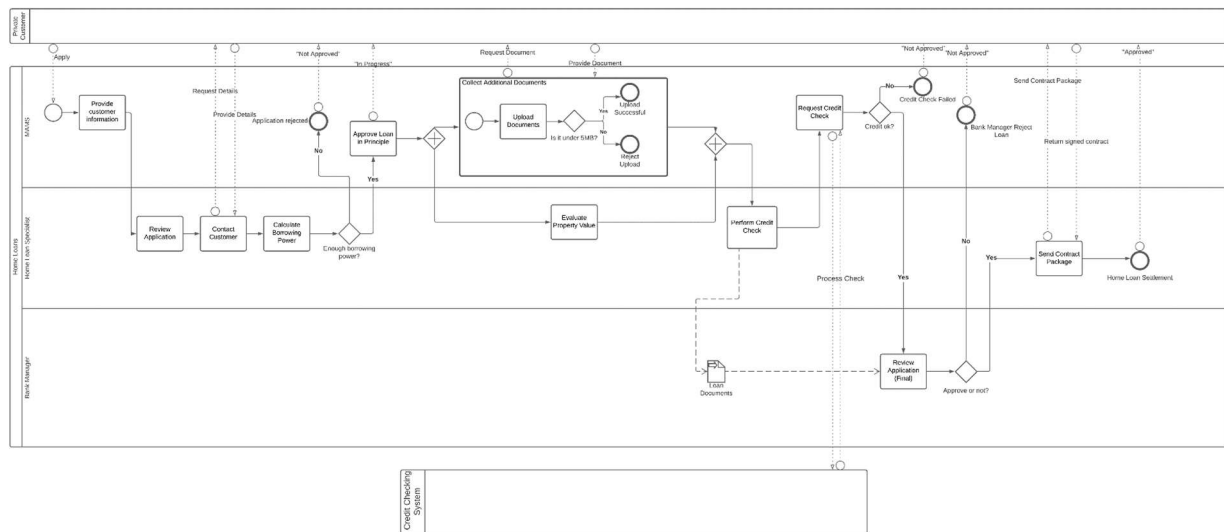
Use Case UC6: Apply VISA Card					
Primary Actor:	Commercial Customer				
Stakeholders:	<ul style="list-style-type: none"><li>• Metro Bank (Bank manager, MAMS)</li><li>• Commercial Customer</li></ul>				
Pre-conditions:	<ul style="list-style-type: none"><li>• Customer is identified and authenticated into MAMS.</li><li>• Have an account with Metro Bank.</li></ul>				
Post-conditions:	<ul style="list-style-type: none"><li>• VISA card approved and mailed to customer. Customer receives card.</li></ul>				
	Actor:		System:		
	1. Customer logs into MAMS with user login and password				
			2. System validates customer’s details		
	3. Customer submits corporate VISA application				
			4. System assesses application and approves		
				4a. System updates application status:	
				Actor:	System:
					1. System updates application status to “Approved”
				4b. System mails card to customer:	
				Actor:	System:
					1. System arrange VISA card to be mailed to customer
	5. Customer receives card				
Extensions:	2a. Invalid user login (not found in system):				
		1. System signals error, rejects entry and requests customer to try again			

	4a. Insufficient information		
		1. System prompts for further information	
			1a. System updates MAMS status:
		Actor:	System:
			1. System changes application status to “In Progress”
	2. Customer provides required additional information		

### 3.7: Accepting Personal Loan Offer

Use Case UC7: Accept Personal Loan Offer		
<b>Primary Actor:</b>	<b>Private Customer</b>	
<b>Stakeholders:</b>	<ul style="list-style-type: none"> <li>• <b>Private Customer</b></li> <li>• <b>Metro Bank</b></li> </ul>	
<b>Pre-conditions:</b>	<ul style="list-style-type: none"> <li>• Customer is identified and authenticated into MAMS.</li> <li>• Customer has been sent pre-approved personal loan offer by email.</li> </ul>	
<b>Post-conditions:</b>	<ul style="list-style-type: none"> <li>• Customer has accepted the pre-approved personal loan offer on MAMS. The specified sum has been loaned to the customer. The loan is recorded by the system.</li> </ul>	
<b>Main Success Scenario:</b>	<b>Actor:</b>	<b>System:</b>
	1. Customer logs into MAMS with user login and password	
		2. System validates customer's details
	3. Customer accepts personal loan offer	
		4. System checks if the offer has expired and loans the money to the customer. It records acceptance of the offer and relevant details relating to the loan. System then indicates to the user that the personal loan has been completed
<b>Extensions:</b>	<i>2a. Invalid user login (not found in system):</i>	
		1. System signals error, rejects entry and requests customer to try again
	<i>4a. Personal loan offer has expired (after 7 days)</i>	
		2. System signals that the offer has expired, and the user will not be able to accept it anymore

#### 4. Business Process Model of Current Home Loan Application Process



**\*Link to Model\*:**

<https://lucid.app/invitations/accept/f614a0b2-ebc5-49be-85ed-cf2cd58b90fd>