

CNIT 38000: Assignment #11

Sequence Diagram (SD)

Using your corrected Assignment #5: Use Case Narrative (UCN) and the Assignment #6: Activity Diagram (AD) to prepare a Sequence Diagram:

LAB OBJECTIVES

Choose the Actors and their Objects.
Develop Lifelines and Activation Points.
Specify Send and Reply Messages with Parameters if applicable.
Distinguish Messages To System.
Distinguish Messages From System.
Model a System Sequence Diagram (SD).

REQUIREMENTS:

1. You **MUST** draw your diagram using Visual Paradigm or Microsoft Visio Professional or Upgraded. The templates that your Sequence Diagram and UML are to be used.
2. For document type, use **UML SEQUENCE**.
3. Use the **examples** below to complete a **Sequence Diagram** from your Use Case Narratives and Activity Diagrams.
4. Your diagram should include both messages to and from the system. Each message should be named with a verb-object phrase and include all necessary parameters that the message would require.
5. Use a TEXT BOX to document ALL your assumptions.
6. Copy and paste your diagram into the Word document (Assignment #11 - Student Answers.doc) where indicated, replacing the yellow, highlighted text. Add your name and submission date. NO .PNG files.
7. DO NOT zip your file
8. Attach the .VPP or .VSDX file(s) in case I have questions.
9. DO NOT use an old student's file, as there are some changed system, actor, process names, etc. in this semester's assignments.
10. Attach and submit the two files **separately** in Brightspace.

Use Your “USE CASE NARATIVE”

(Example of Use Case Narrative to create a Sequence Diagram)

USE CASE NAME:	Apply for Bank Account	USE CASE TYPE & LEVEL Business: <input type="checkbox"/> Requirements <input checked="" type="checkbox"/> Analysis <input type="checkbox"/> Design <input type="checkbox"/>
USE CASE ID:	BUC-PUB 1.0	
PRIORITY:	High	
SOURCE:	Assignment 3 write-up	
PRIMARY BUSINESS ACTOR:	Potential Customer (Initiating actor)	
OTHER PARTICIPATING ACTORS:	Bank Manager (Transaction Facilitator), Credit Bureau	
DESCRIPTION:	This use case describes the process that a Potential Customer goes through to apply for a bank account which can be either checking, savings, or both.	
PRE-CONDITION:	Bank Manager has logged on the bank account management system.	
TRIGGER:	This use case is initiated when the Potential Customer submits an application to the Bank Manager to open a bank account.	
TYPICAL COURSE OF EVENTS:	ACTOR ACTION	SYSTEM RESPONSE
	Step 1: This use case is initiated when the Potential Customer submits an application to the Bank Manager.	
	Step 2: The Bank Manager reviews the application for any errors or omissions.	
	Step 3: The Bank Manager selects the option to open a new bank account.	
		Step 4: The system responds by prompting the Bank Manager for the new account information (first & last name, address, DOB, phone number, SSN, <u>Account Type (checking or savings or both).</u>
	Step 5: The Bank Manager provides the new account information.	
		Step 6: System responds by verifying the new account information in terms of data and format checking changes the application status to pending.
		Step 7: The system responds by submitting a request to the Credit Bureau for a credit report and associated score.
	Step 8: The Credit Bureau calculates the credit score and sends the credit profile to the system.	
		Step 9: The system responds by displaying the credit report and score to the Bank Manager along with prompting them for an approval.
	Step 10: The Bank Manager reviews the credit report to ensure credit worthiness.	
Step 11: The Bank Manager approves the account.		

		Step 12: The system responds by generating an account number and changes the application status to approved.
		Step 13: The system responds by storing the account information. (Concurrent with Step 14).
		Step 14: The system responds generating an account identification card which is then given to the Potential Customer by the Bank Manager. (Concurrent with Step 13).
	Step 15: This use case concludes when the Customer receives their new account information and their ID card from the Bank Manager. The use case ends.	
ALTERNATE COURSES:	Alt Step 2: Bank Manager finds omissions or errors and returns it to the Potential Customer to correct them. Return to Step 1.	
	Alt Step 6: The system verifies the new account information terms of data and format checking and finds errors. The system responds by displaying the error then prompts the Bank Manager to correct. Return to Step 5.	
	Alt Step 11: Bank Manager denies the application for a bank account, (concurrent: notifies the Potential Customer and selects the option to deny the account). The system stores the denied application and then generates a letter stating the reasons the application was rejected, and then the denial letter is sent to the Potential Customer by the Bank Manager. The application status is set to denied and the application decision reason is stored. The use case ends.	
CONCLUSION:	This use case concludes when the Potential Customer receives their new account information and their card.	
POST-CONDITION:	The post condition of this use case is that the Potential Customer is given approval for a new bank account after the proper credit checks have been performed and now is considered a customer of the bank. Their account information is stored in the system. Or the Potential Customer is denied a new account and the reasons why are communicated and documented.	

(Example of Use Case Narrative and your Activity Diagram to create a Sequence Diagram)

