College of Arts, Media and Technology
"College for Knowledge workers' Innovation"

LAB 07 : Activity Diagram 2

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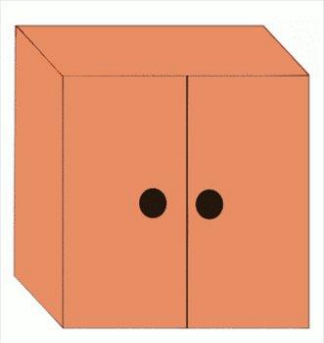
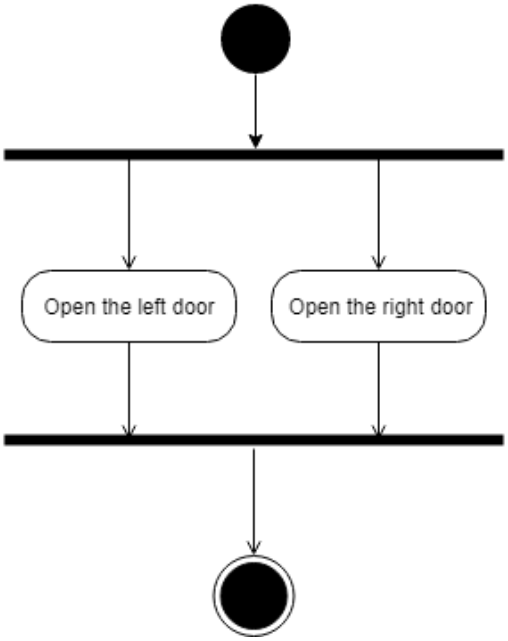
Every activity diagram must be drew in draw.io

Given the following picture,

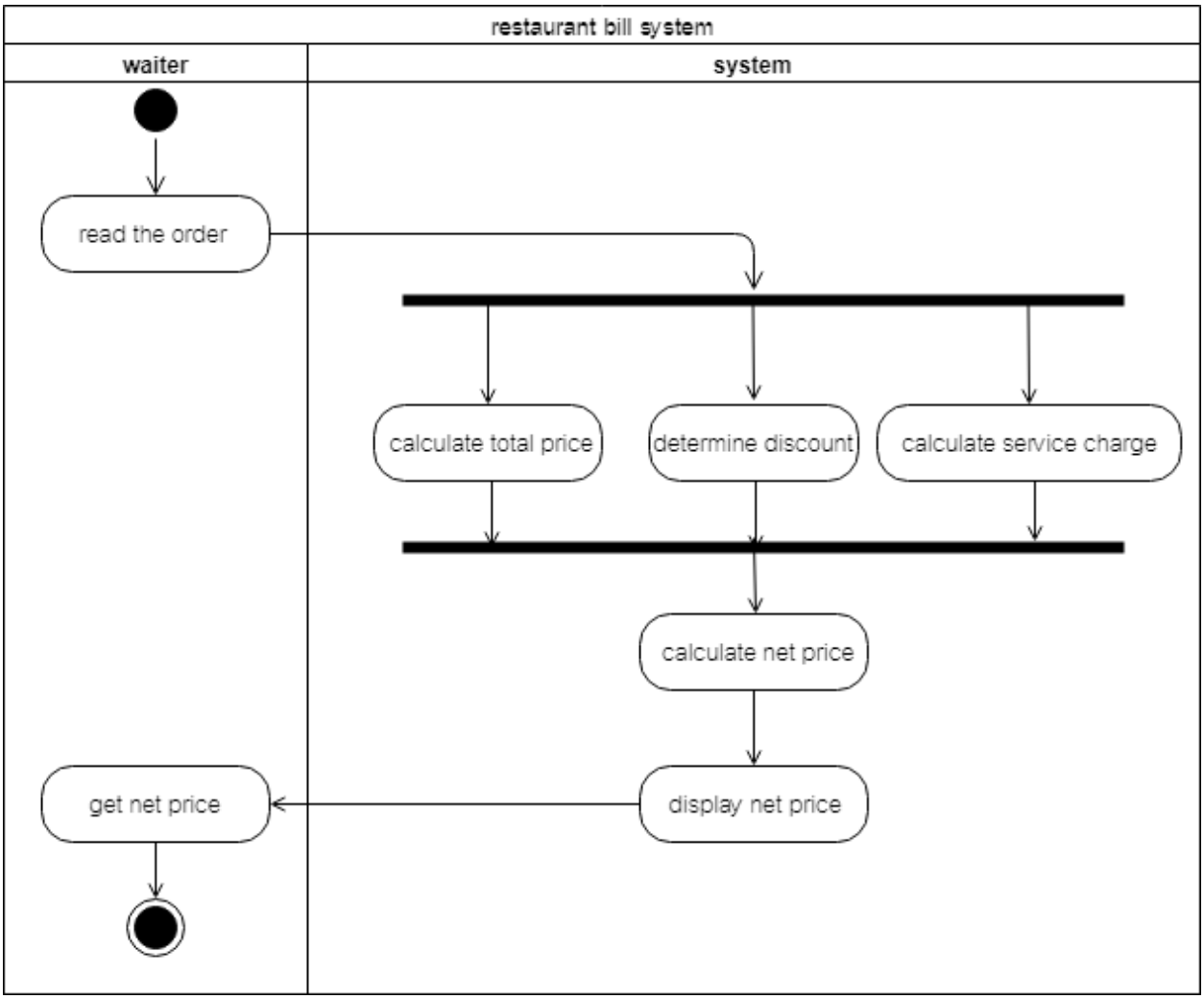


Use it to answer the problem 1

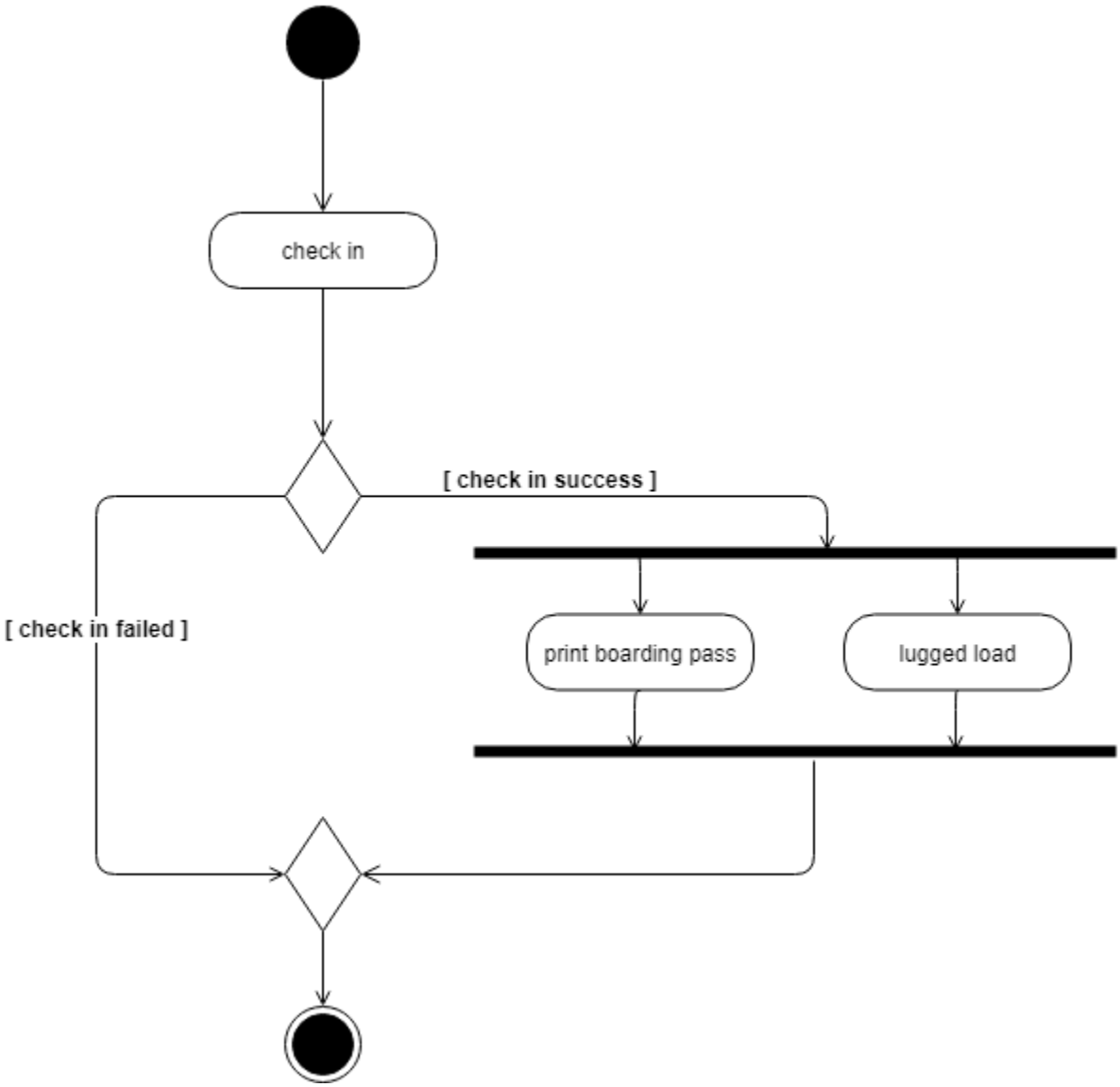
1. Create an activity diagram of opening both door of the cabinet at the same time.



2. Create an activity diagram in draw.io for calculating the restaurant bill (the swimlane must be used in this example). The step of this process is to read the order from waiter. Then, the system will first calculate the total price. At the same time, the system will determine the discount (percentage) and the service charge (percentage) of the order. This process is an extremely complicated. So, you cannot combine them into 1 action. After these 3 processes are complete, the net price will be determined by applying the discount to the total price and follow by the service charge. Finally, the system shall display the net price to the waiter.



3. A simple passenger check-in system starts when a passenger arrives at the self-service counter. The passenger then check-in with the system. If the check-in fails, the system shall terminate. Otherwise, the passenger prints the boarding pass and the luggage is loaded into the cargo at the same time.



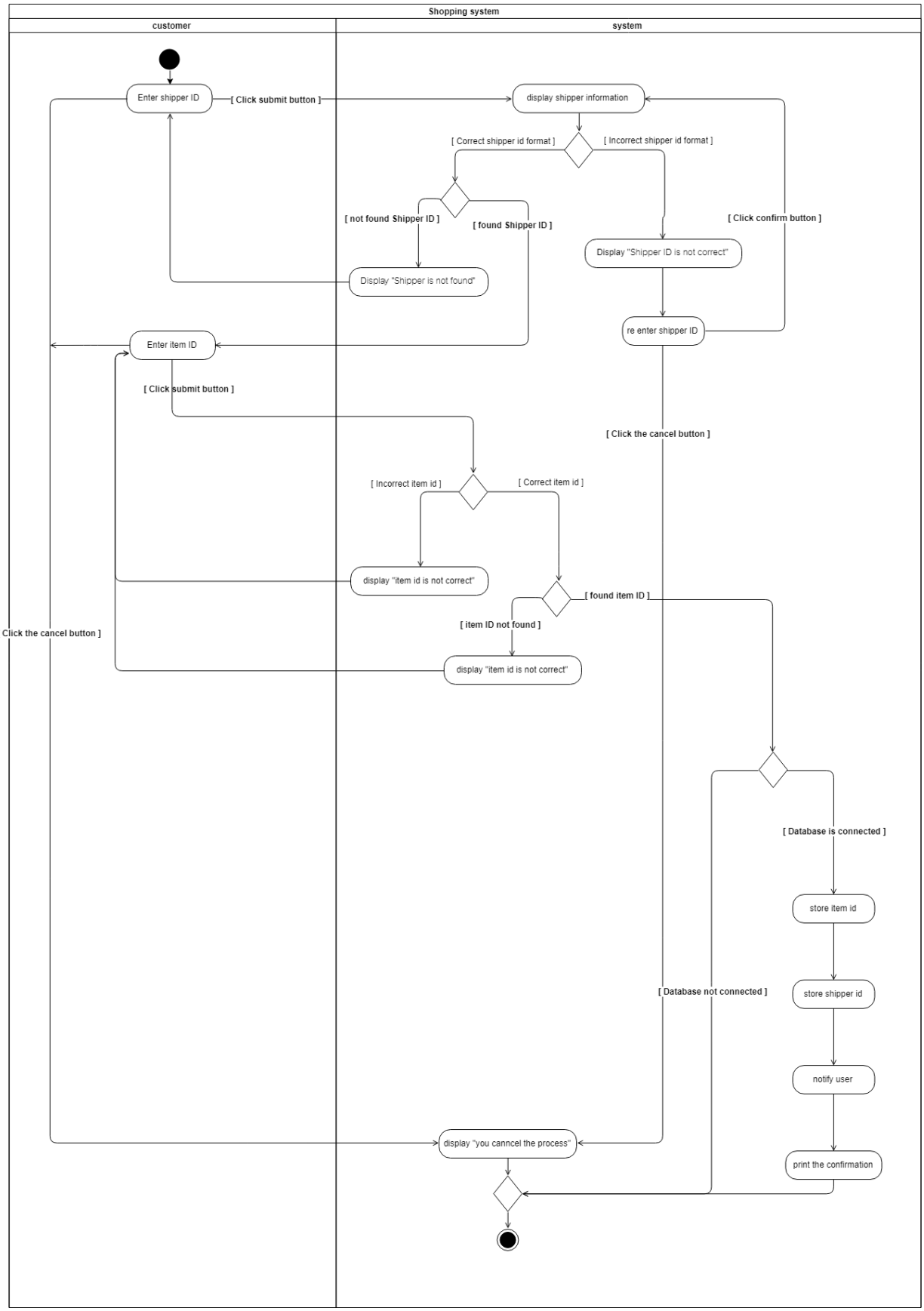
4. Given the following use case description

Use Case ID	UC-001		
Use Case Name	Receive item		
Created By	Prompong Sugunnasil	Last Update By	Prompong Sugunnasil
Date Created	13/02/2020	Last Revision Date	13/02/2020
Actors	Customer		
Description	The objective of this use case is to read the shipper information and the item information. Then, the system shall store the combination in the database.		
Trigger	The customer clicks at the receive-product UI.		
Preconditions	The user have logged in to the system.		

Use Case Input Specification			
Input	type	Constraint	Example
Shipper ID	String	The shipper ID is a 5-character combination of numeric value, 0 -9. The first place of the ID is the character 's'.	s0001
Item ID	String	The item ID is a 5-character combination of numeric value, 0 -9. The first place of the ID is the character 'i'.	i0002

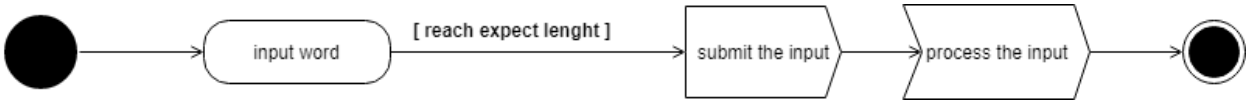
Post conditions	If the use case ends in a successful case, • The customer is notified "The process is success". • The shipper ID and item ID are stored in the database. If the use case ends in a fail case, • The system returns to initial state.	
Normal Flows	Customer	System
	1.Customer enters the shipper ID. [E1: The user clicks cancel button.] 3.Customer enters the items ID and click submit. [E1: The user clicks cancel button.]	2.The system displays the shipper information. [A1: the shipper ID is not found.] [A2: the shipper ID format is not correct.]

		4. The system will check the item id [A3: the item ID is not found.] [A4: the item ID is not correct.] 5. The system store the item id and shipper id in the database. [E2: The database cannot be connected.] 5.The system will notify the customer that the receiving item is success. 6.The system prints the confirmation.
Alternative Flow	[A1: the shipper ID is not found.] 1.The system displays “Shipper is not found” 2.The system prompts to re-enter the shipper ID. 3.The system returns to step 1 of normal flow. [A2: the shipper ID is not correct.] 1.The system displays “Shipper ID is not correct” 2.The system prompts to re-enter the shipper id. 3.The system returns to step 2 of normal flow. [A3: the item ID is not found.] 1.The system displays “Item is not found” 2.The system prompts to re-enter the item id. 3.The system returns to step 3 of normal flow. [A4: the item ID is not correct.] 1.The system displays “item ID is not correct” 2.The system prompts to re-enter the item id. 3.The system returns to step 3 of normal flow.	
Exception Flow	[E1: The user clicks cancel button.] 1. The system displays “You have canceled the process” 2. The flow ends in failure case. [E2: The database cannot be connected.] 1.The flow ends in failure case.	
Assumption	The actor understands English. The actor has appropriate authority to use this use case The internet is available.	


Shopping system
customer
system
Enter shipper ID
[Click submit button]
display shipper information
[Correct shipper id format]
[Incorrect shipper id format]
[not found Shipper ID]
[found Shipper ID]
[Click confirm button]
Display "Shipper ID is not correct"
Display "Shipper is not found"
re enter shipper ID
Enter item ID
[Click submit button]
[Click the cancel button]
[Incorrect item id]
[Correct item id]
display "item id is not correct"
[found item ID]
[item ID not found]
[Click the cancel button]
display "item id is not correct"
[Database is connected]
store item id
[Database not connected]
store shipper id
notify user
display "you canncel the process"
print the confirmation

5. An input validation system focus on the length of the input. The system waits for the keystroke from keyboard (outside system). If the input length matched with the expected length, the system submit input to other processing unit and ends the system. Draw the activity diagram of the system.

   Draw the activity diagram in draw.io



6. In a theater system, the audience can reserve the seat. The system then sends the payment information to the credit card company which is an outside stakeholder. The audience have to complete the payment within 24 hours. Then, the credit card company will send the confirmation back to the system. Otherwise, the reservation is canceled. Draw the activity diagram of the system.