

Chapter 5 – Extending the Requirements Models

Running Cases: On the Spot Courier Services

Read the On the Spot Courier Services case study in the back of chapter 5.

Do only number 1 and 3. Included is the #2 answer as an example.

READ ALL OF THE INSTRUCTIONS BEFORE YOU GET STARTED.

1. Based on this description, develop the following for the use case *Request a package pickup* and for the Web customer scenario:
 - i. A fully developed use case description – use the table below as a **template**.

i. A fully developed use case description – table **template**.

Use case name:		
Scenario:		
Triggering event:		
Brief description:		
Actors:		
Related use cases:		
Stakeholders:		
Preconditions:		
Postconditions:		
Flow of activities	Actor	System
Exception conditions:	<i>Hint: there is at least one exception. Delete the hint text and then enter the exception condition(s).</i>	

For the diagrams -- create the diagrams using Visio. You may use a different drawing tool so long as the symbols and formats match the textbook examples. Then copy/paste the diagram in to the Word document with all of the answers. For now on be sure to create just one document. Watch the video in the Resources in TalonNet on how to copy/paste the diagram from Visio to Word.

ii. An activity diagram – Hint: This diagram will have a For each loop. Be sure to use the bar/line and note the For each and End for each in textboxes on your diagram. Hmm... what? For each loop? Refer back to pages 57- 60 for more details on creating an activity diagram. Watch the video for help with the bar and textbox symbols.

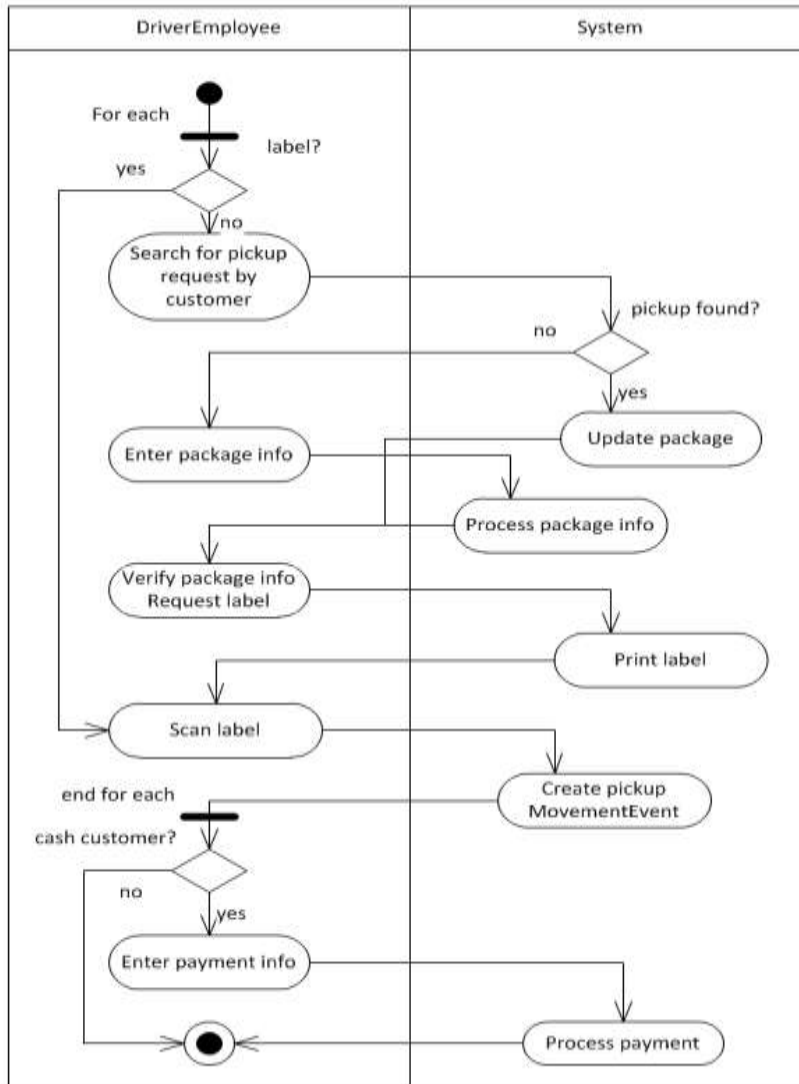
iii. System sequence diagram - Hint: This diagram will have a loop frame. The loop frame is tricky in Visio. Watch the video for help.

2. Here is the solution for number 2 to give you some ideas. Based on the same description in the case study, develop the following for the use case *Pickup a package*:

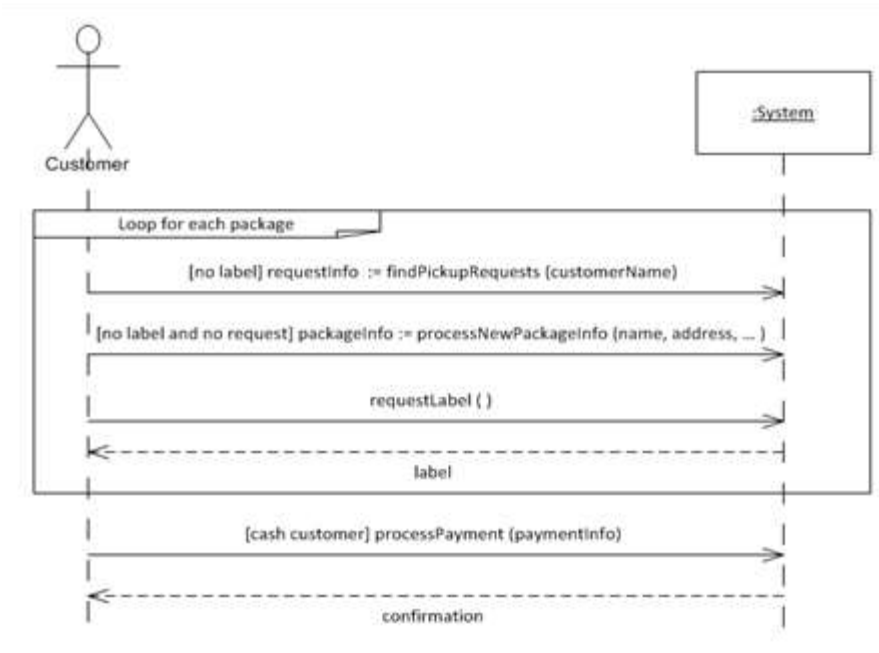
2 i. A fully developed use case description solution:

Use case name:	Pickup a package (Enter package pickup information)	
Scenario:	Delivery employee picks up package	
Triggering event:	Delivery employee arrives at customer's location and picks up a package	
Brief description:	Delivery employee verifies package with pickup request information, OR enters new package information. If cash customer, process payment.	
Actors:	Driver	
Related use cases:	Create customer and customer account Accept payment Scan package (movement)	
Stakeholders:	Customer, Driver, Bill	
Preconditions:	Customer should exist (else invoke Create customer use case)	
Postconditions:	Create package record and connect with Customer, PickupRequest, Movement event	
Flow of activities	Actor	System
	1. If package has NO label, search for request by Customer name 2. If pickup request not found, enter new package info 3. Request print label 4. Scan package label 5. If cash customer, enter payment info	1.1 Access pickup info, update package If no pickup info, display none 2.1 Process new package info 3.1 Print label 4.1 Update pickup request, package Create pickup MovementEvent 5.1 Process payment
Exception conditions:	5.1 Invalid payment data	

2 ii. An activity diagram solution - Hint: The activity diagram for number 2 is more complex than for number 1 above. Number 2 has the decision diamond symbol, number 1 does not.



2. iii. A system sequence diagram solution:



3. Develop a state machine diagram describing all the possible status conditions for a Package object. Hint: Since state machine diagrams are one of the tougher diagrams to develop and usually require multiple iterations I am giving you the states and transitions. See table below. And, of course use Visio to draw the diagram and watch the video in the Resources. Although I believe this diagram is straight forward in Visio.

State	Exit transition
Pending pickup	packagePickup ()
Picked up	arriveAtWarehouse ()
At warehouse	loadedOnDeliveryTruck ()
Out for delivery	delivered ()
Delivered	none
Lost	found ()

See notes and points possible:

Description	Points Possible
Spelling & Grammar	2
Filled out the use case description table correctly for the use case Request a package pickup for the Web customer scenario and understands each section of the table.	3
Created an activity diagram for the use case Request a package pickup and for the Web customer scenario. The diagram has the start and finish symbols, a For Each loop, and clearly shows what the WebCustomer does and what the System does.	3
Created a system sequence diagram for the use case Request a package pickup and for the Web customer scenario. The diagram clearly shows the sequence of interactions between the Customer actor and the System. It clearly shows the Loop for each package.	3
Developed a state machine diagram describing all the possible status conditions for a Package object . The diagram shows the start and stop symbols. It clearly shows states and exit transitions in a logical order.	3
Uses correct symbols and lines on diagrams.	3
Uses proper capitalizations, camel casing, and punctuation as shown in the textbook on diagrams.	3
Total Points:	20