recit -2
sequence and activity diagrams: behavioral diagrams

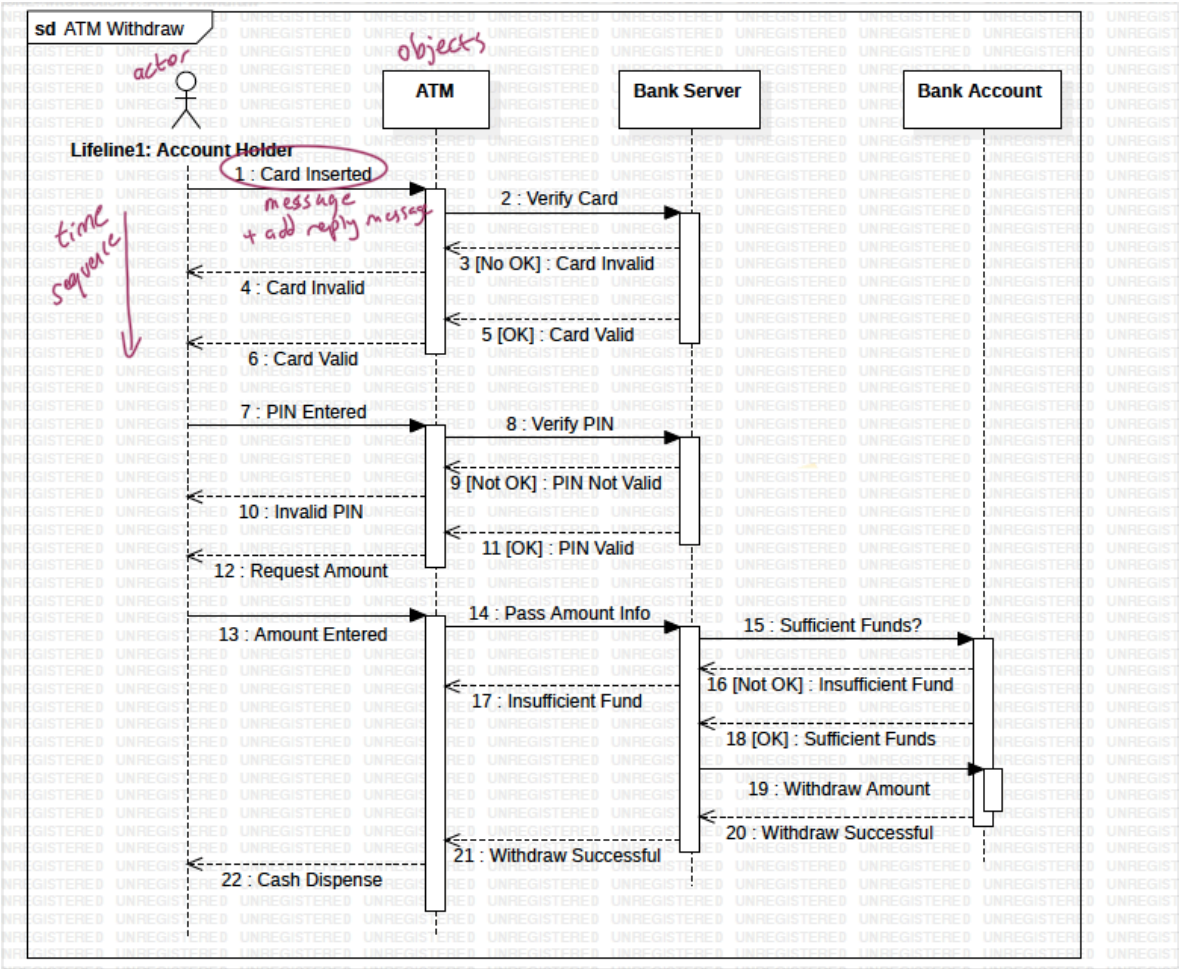
sequence

interaction diagrams->behavioral diagrams
interaction diagrams:
1-sequence
2-interaction overview
3-timing
4-communication

sequence diagrams: interaction and behavioral diagrams
-shows interaction between objects/classes(in software system) in a system
-shows interactions in order
-shows sequences of events&messages
-for one or more use case it is drawn, but there must be only one actor

vertical axes: time
horizontal axes: object

1- decide actor and objects
to add actor -> collaboration ->add->actor , drag it
objects are using lifeline

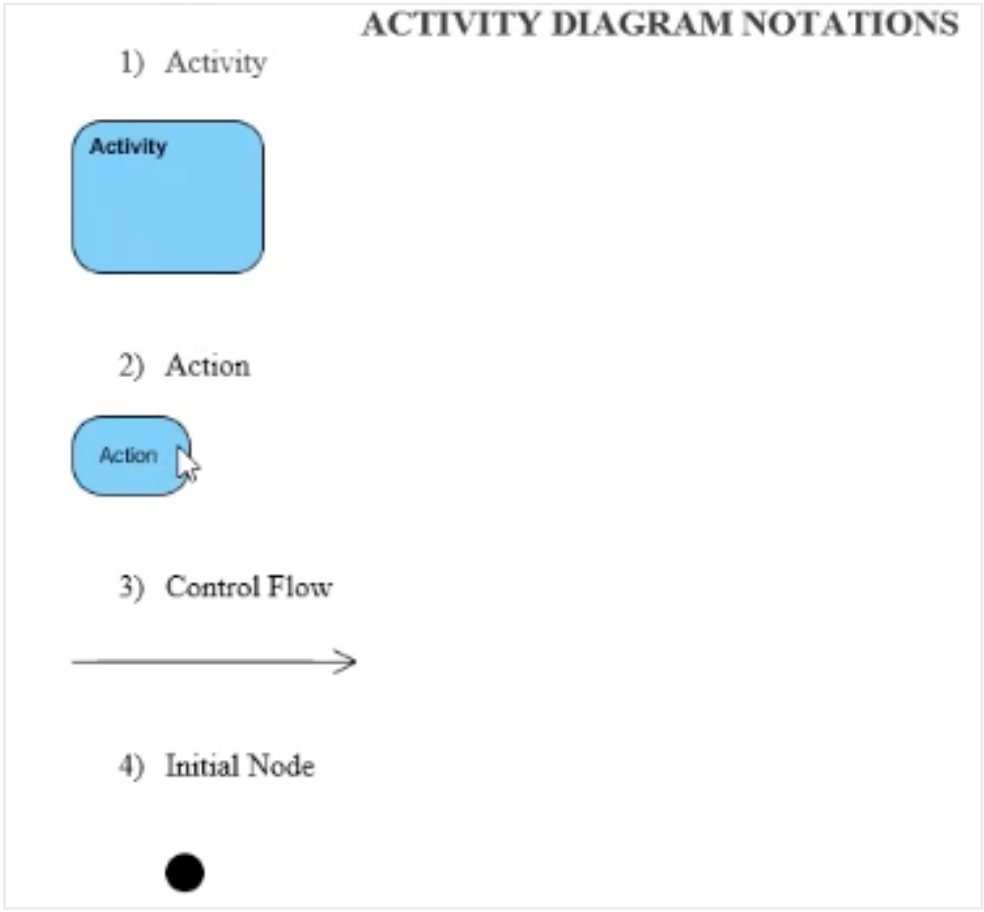


activity

work flow for the activities, interactions, flow of activities
like af flow chart

describes flow of control in a system
consist of activities and links
the flow can be sequential, concurrent(parallel), branched
activities: functions of the system
single actor with generally one use case
what is going to happen if we execute the program

1-activities
2-association between activities
3-conditions
4-constraints



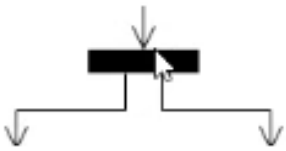
5) Activity Final Node

6) Decision Node

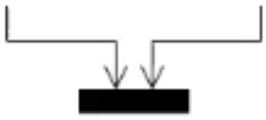
7) Merge Node

*if you use decision node you have to use merge node too

8) Fork Node
Split behavior into a set of parallel or concurrent flows of activities (or actions)

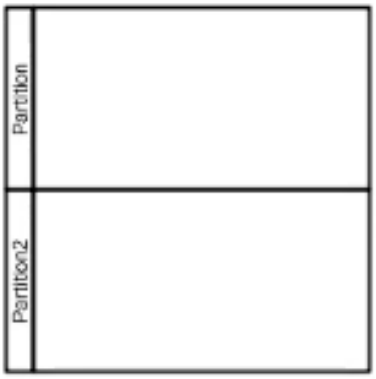


9) Join Node
Bring back together a set of parallel or concurrent flows of activities (or actions).



*if you use fork node you have to use join node too

10) Swimlane and Partition (Swimlane Diagram)
A way to group activities performed by the same actor on an activity diagram or to group activities in a single thread



Examples

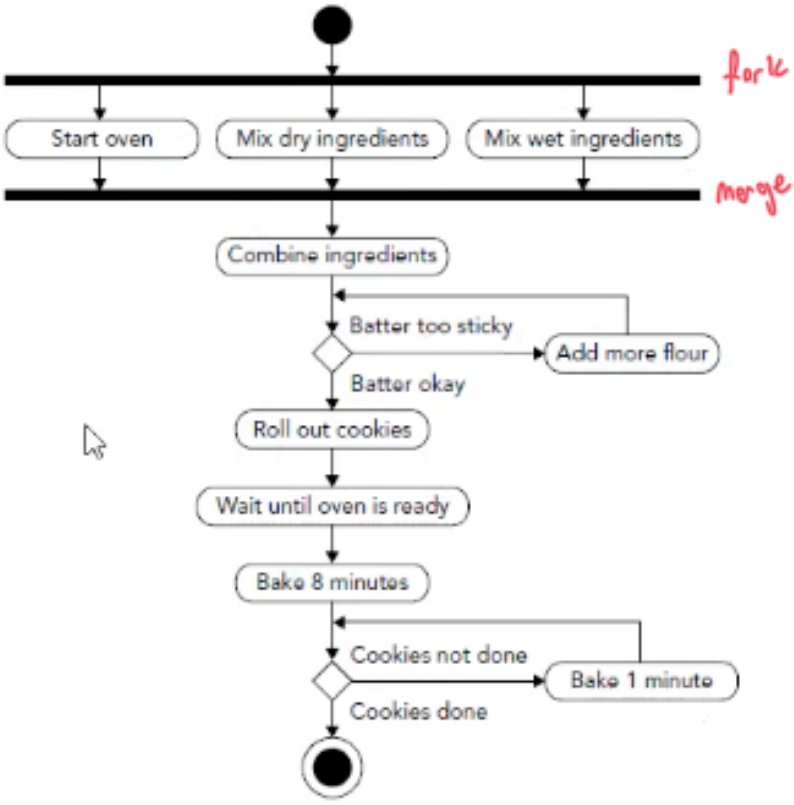
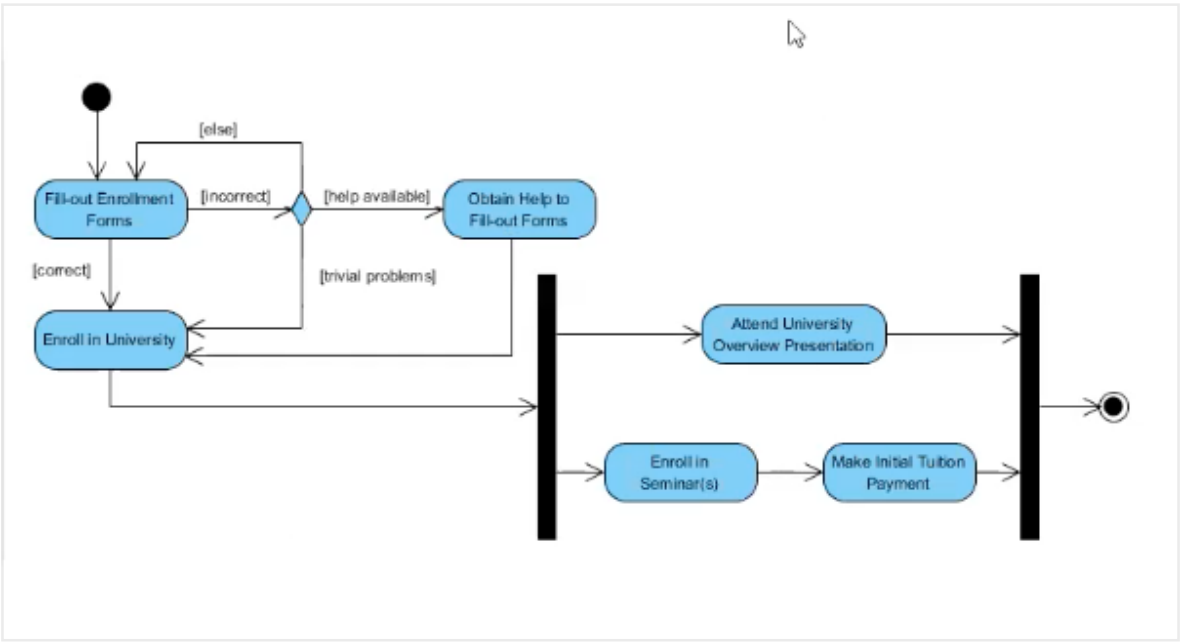
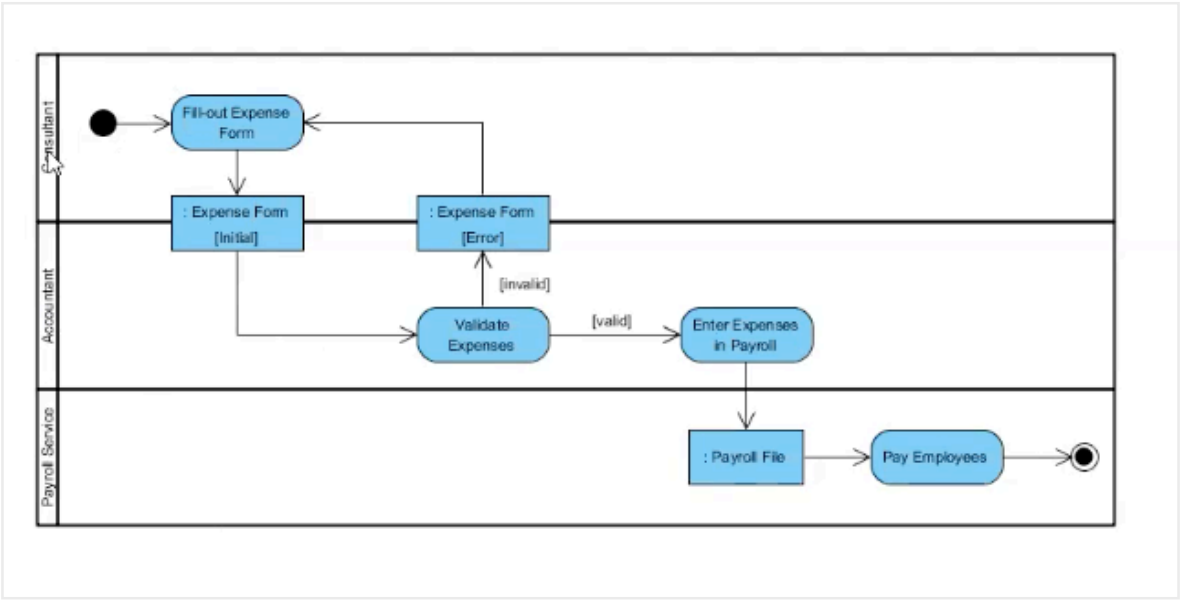
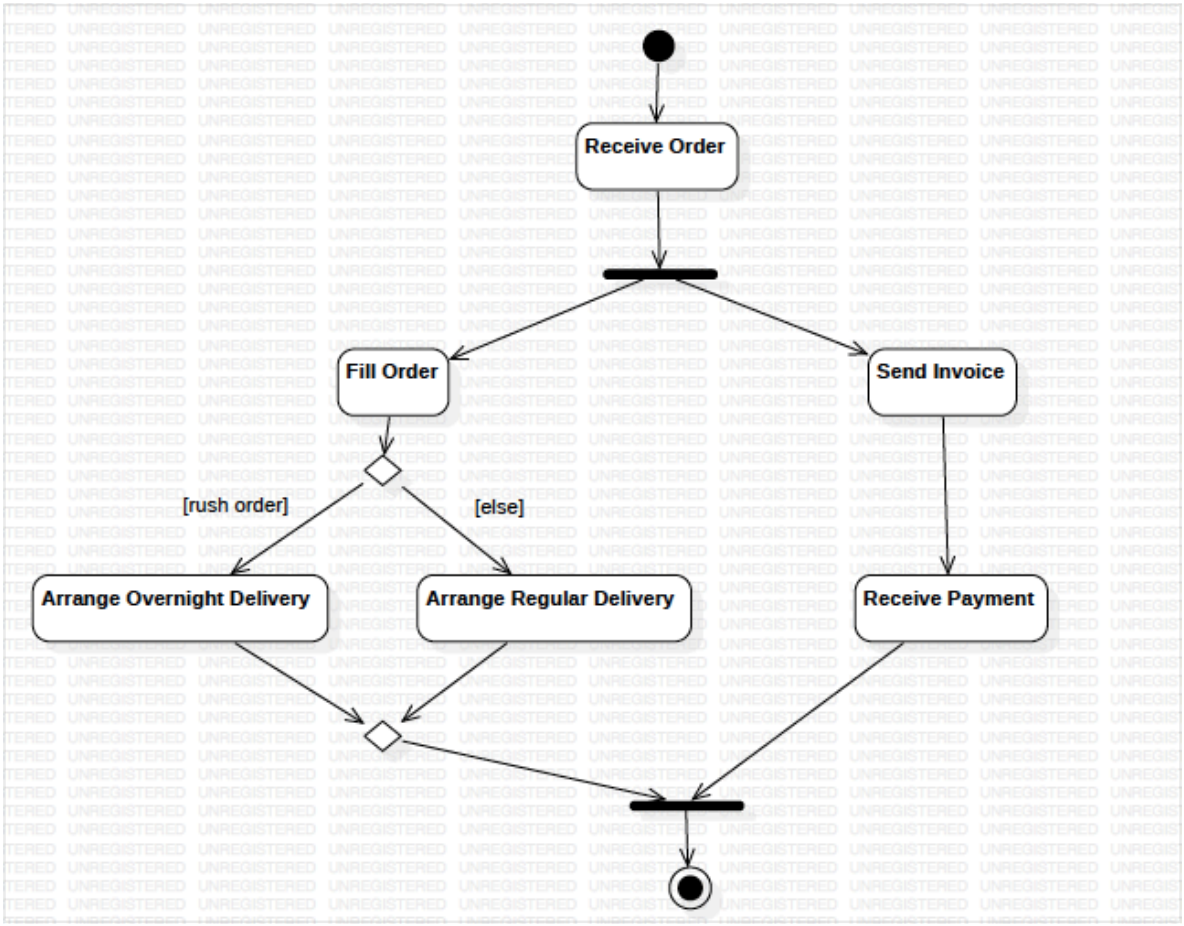
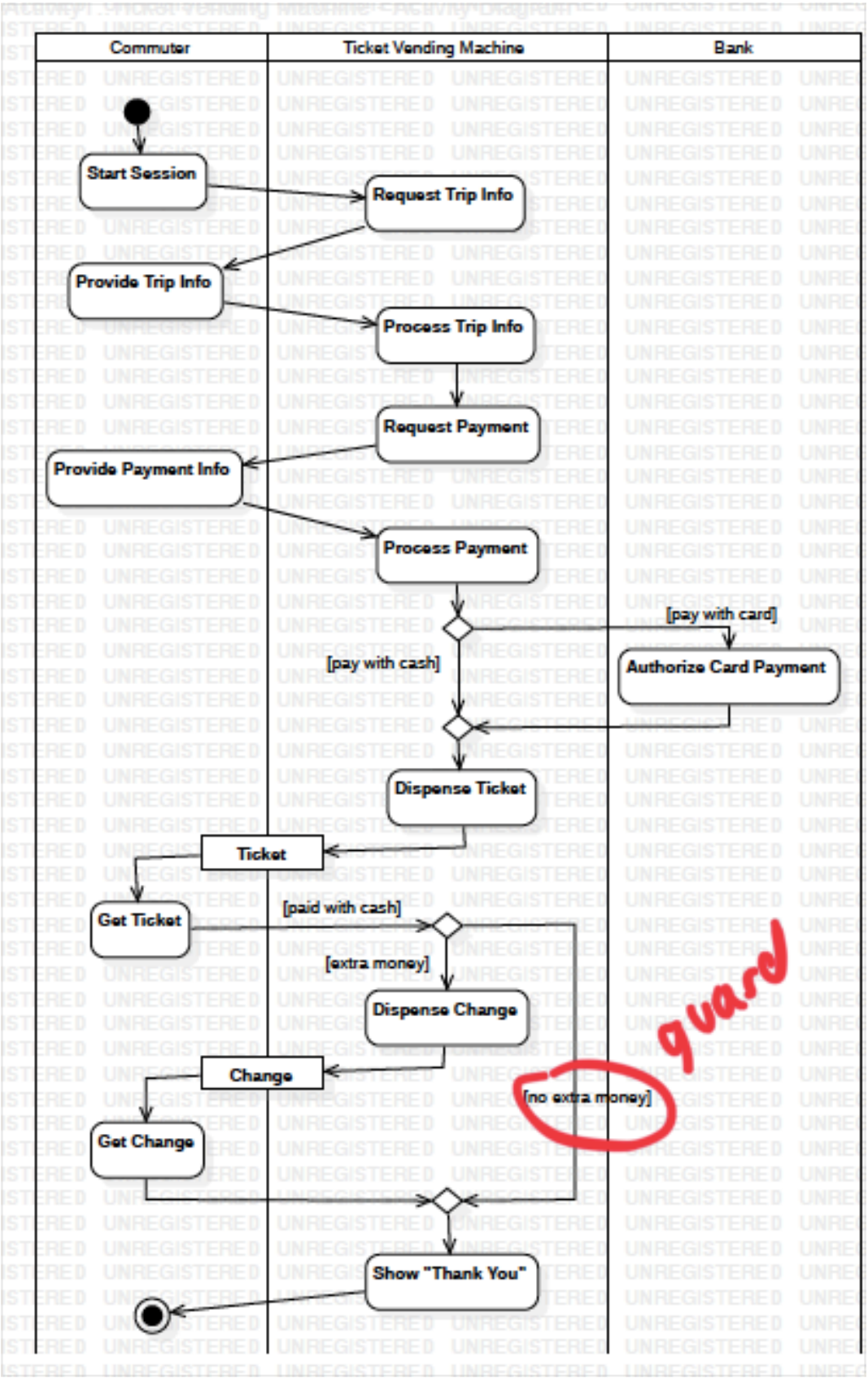


FIGURE 5-10: An activity diagram is a bit like a flowchart showing how work flows.


[else]
Fill-out Enrollment Forms
[incorrect]
[help available]
Obtain Help to Fill-out Forms
[correct]
[trivial problems]
Enroll in University
Attend University Overview Presentation
Enroll in Seminar(s)
Make Initial Tuition Payment


Consultant
Accountant
Payroll Service
Fill-out Expense Form
: Expense Form [Initial]
: Expense Form [Error]
[invalid]
Validate Expenses
[valid]
Enter Expenses in Payroll
: Payroll File
Pay Employees


Receive Order
Fill Order
Send Invoice
[rush order]
[else]
Arrange Overnight Delivery
Arrange Regular Delivery
Receive Payment


Commuter
Ticket Vending Machine
Bank
Start Session
Request Trip Info
Provide Trip Info
Process Trip Info
Request Payment
Provide Payment Info
Process Payment
[pay with card]
[pay with cash]
Authorize Card Payment
Dispense Ticket
Ticket
Get Ticket
[paid with cash]
[extra money]
Dispense Change
Change
[no extra money]
guard
Get Change
Show "Thank You"