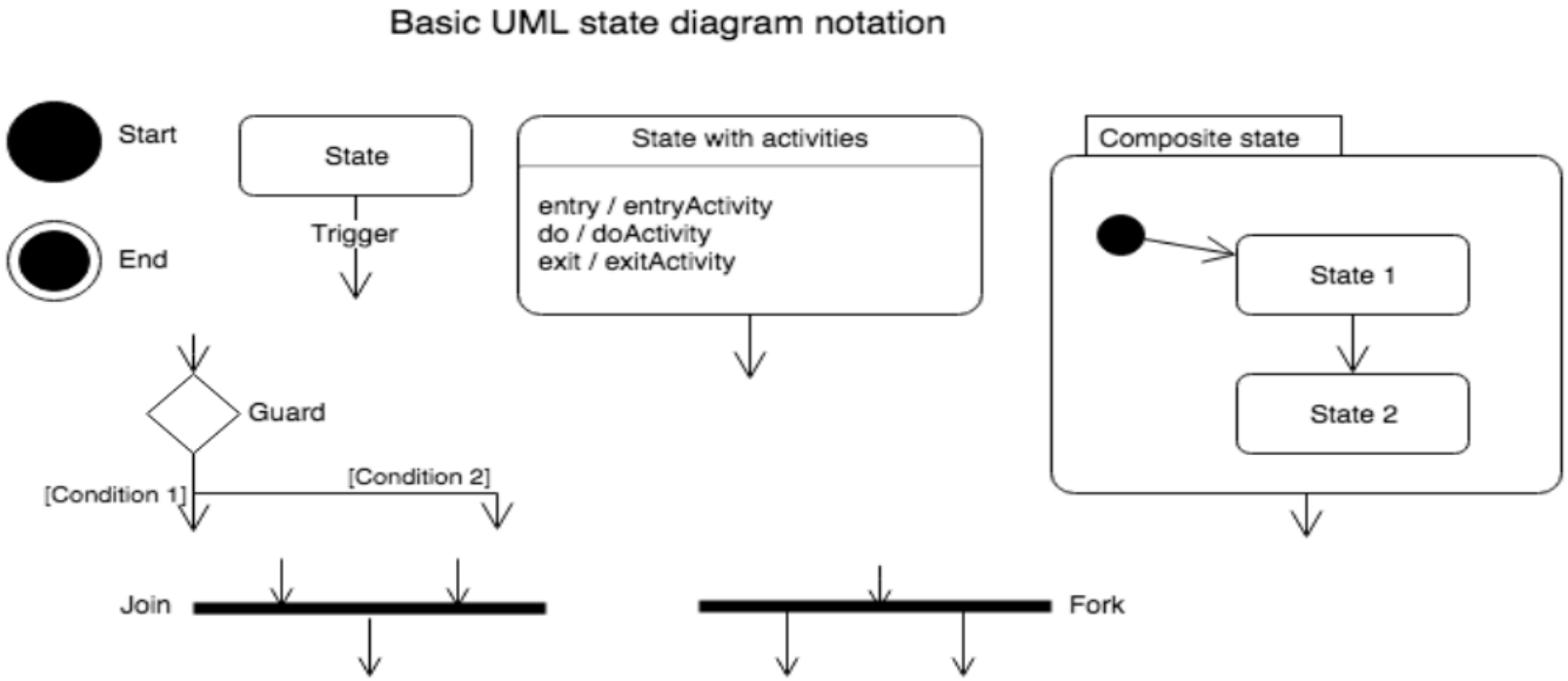
Aim: To draw the behavioral view diagram: State-chart diagram

Description:

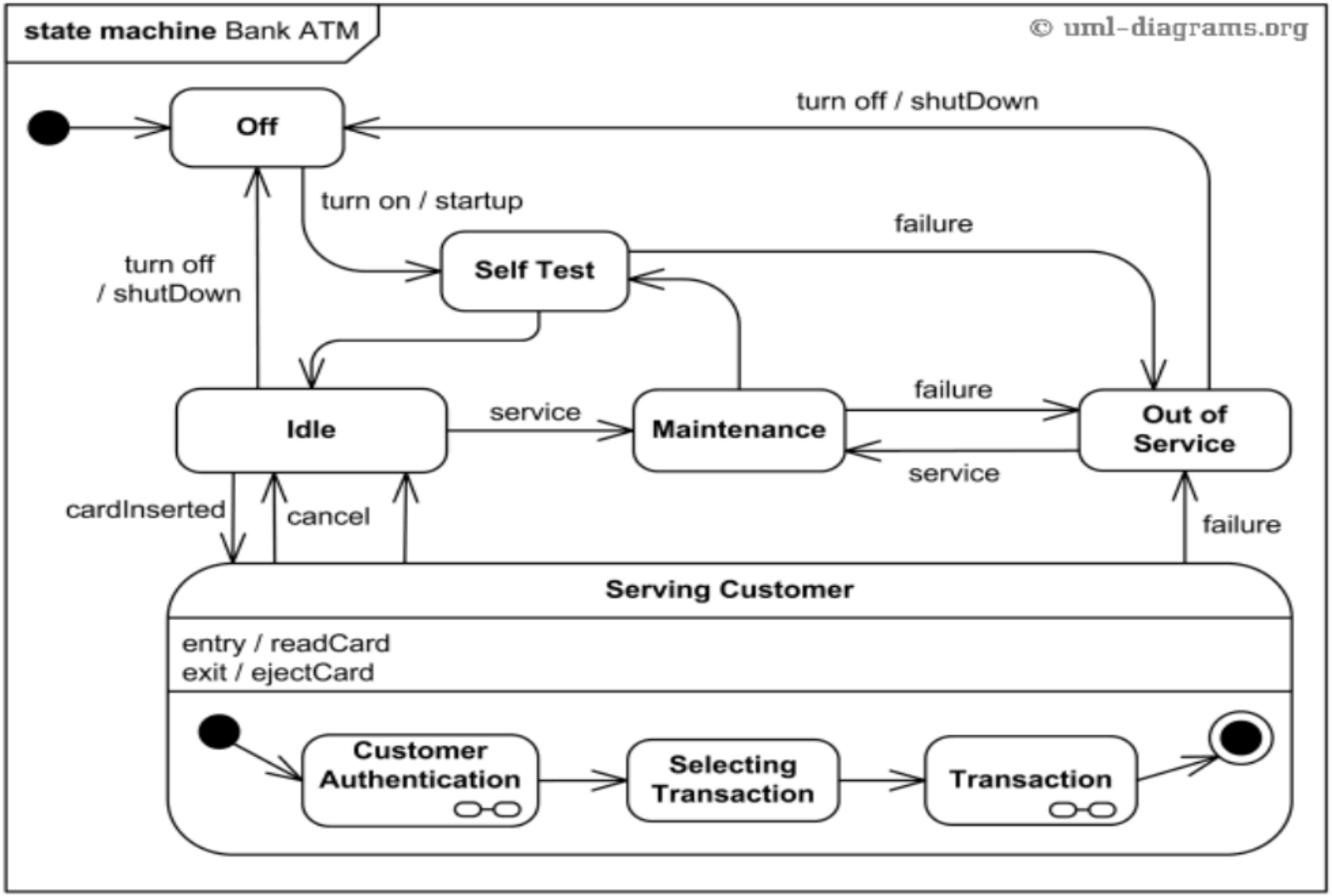
A statechart diagram shows a state machine, which specifies the sequences of states that an object can be in, the events and conditions which cause the object to reach those states, and the actions which take place when those states are reached.

Name	A textual string which distinguishes the state from other states; a state may also be anonymous, meaning that it has no name.
Entry/exit actions	Actions executed on entering and exiting the state.
Internal transitions	Transitions that are handled without causing a change in state.
Substates	The nested structure of a state, involving disjoint (sequentially active) or concurrent (concurrently active) substates.
Deferred events	A list of events that are not handled in that state but are postponed and queued for handling by the object in another state.

Elements of State chart diagram



Code :


state machine Bank ATM
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Off
turn off / shutDown
turn on / startup
failure
Self Test
turn off
/ shutDown
Idle
service
Maintenance
failure
Out of
Service
service
cardInserted
cancel
failure
Serving Customer
entry / readCard
exit / ejectCard
Customer
Authentication
Selecting
Transaction
Transaction

Aim: To draw the behavioral view diagram: Collaboration diagram

Description:

- Collaboration diagrams (known as Communication Diagram in UML 2.x) are used to show how objects interact to perform the behavior of a particular use case, or a part of a use case.
- A Collaboration is a collection of named objects and actors with links connecting them. They collaborate in performing some task.
- A Collaboration defines a set of participants and relationships that are meaningful for a given set of purposes.
- A Collaboration between objects working together provides emergent desirable functionalities in Object-Oriented systems.

Objects

An object is represented by an object symbol showing the name of the object and its class underlined, separated by a colon:

Object_name : class_name

Actors

Normally an actor instance occurs in the collaboration diagram, as the invoker of the interaction

Links

Links connect objects and actors and are instances of associations and each link corresponds to an association in the class diagram

Messages

A message is a communication between objects that conveys information with the expectation that activity will ensue. In collaboration diagrams, a message is shown as a labeled arrow placed near a link.

1. The message is directed from sender to receiver
2. The receiver must understand the message
3. The association must be navigable in that direction

ATM UML Collaboration Diagram