



Week-5-Lesson-1

Activity Diagram and Sequence Diagram



Daffodil
International
University



Topics Covered

- Activity diagrams
- Elements of activity diagram
- Example of activity diagram
- Sequence diagram
- Elements of Sequence diagram
- Example of Sequence diagram

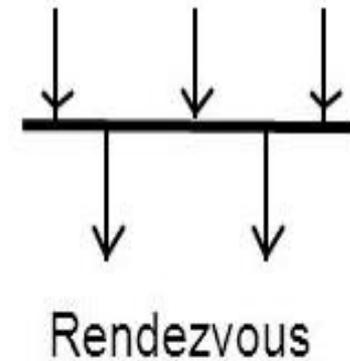
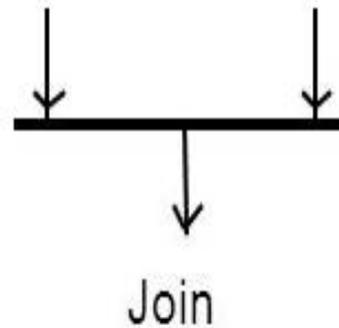
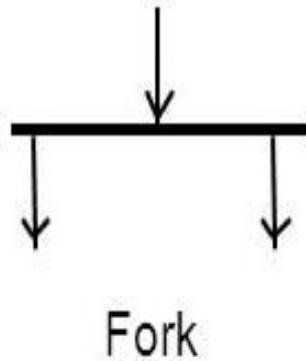
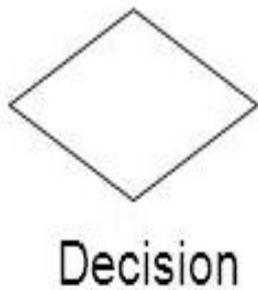
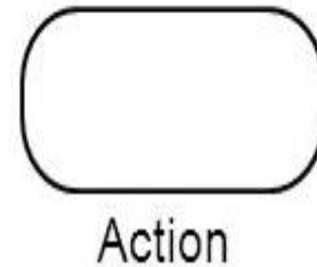


Activity Diagram

- Activity Diagrams** to illustrate the flow of control in a system and refer to the steps involved in the execution of a use case.
- An activity diagram focuses on condition of flow and the sequence in which it happens.
- Activity diagrams describe the workflow behavior of a system.

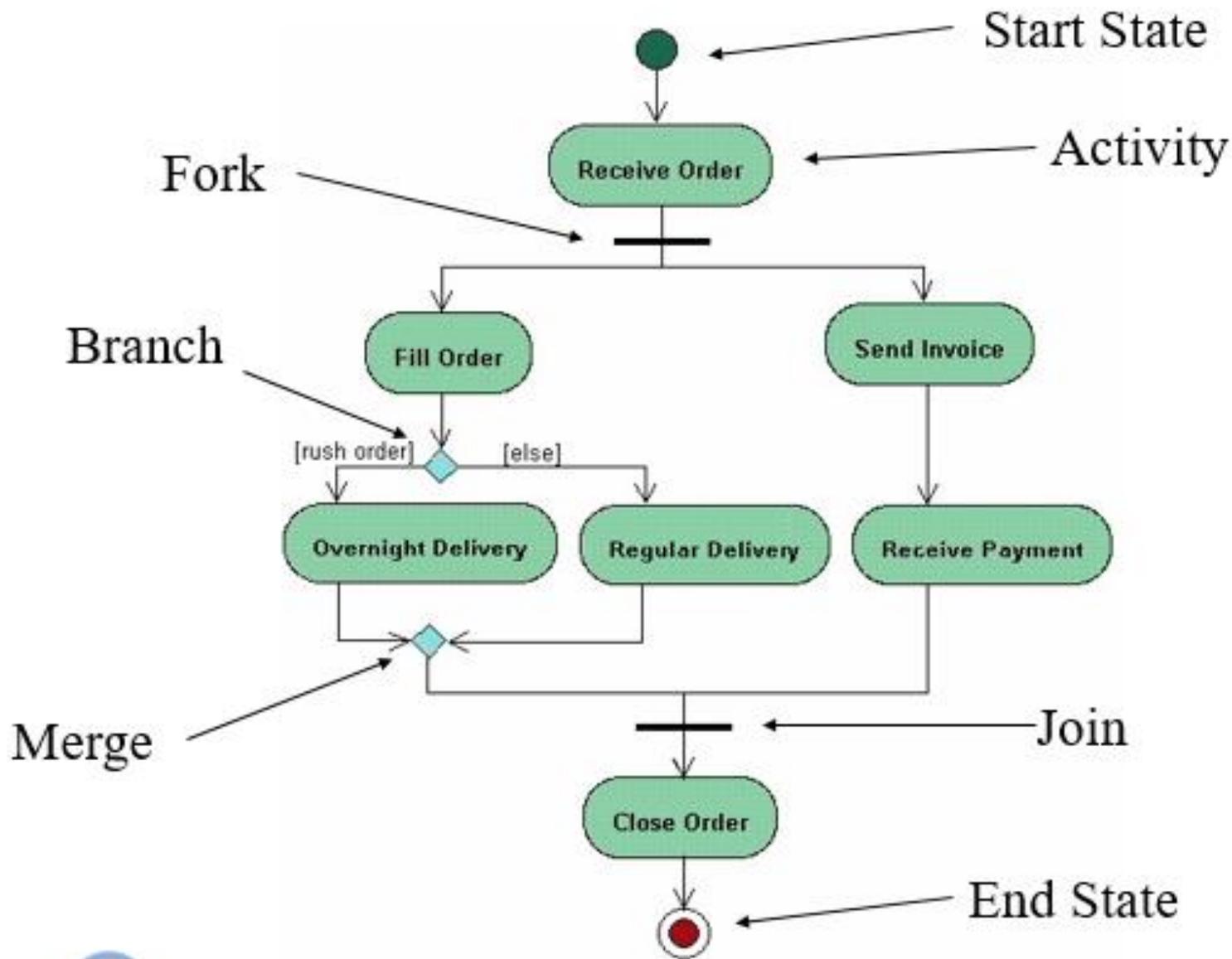


Elements of Activity Diagram



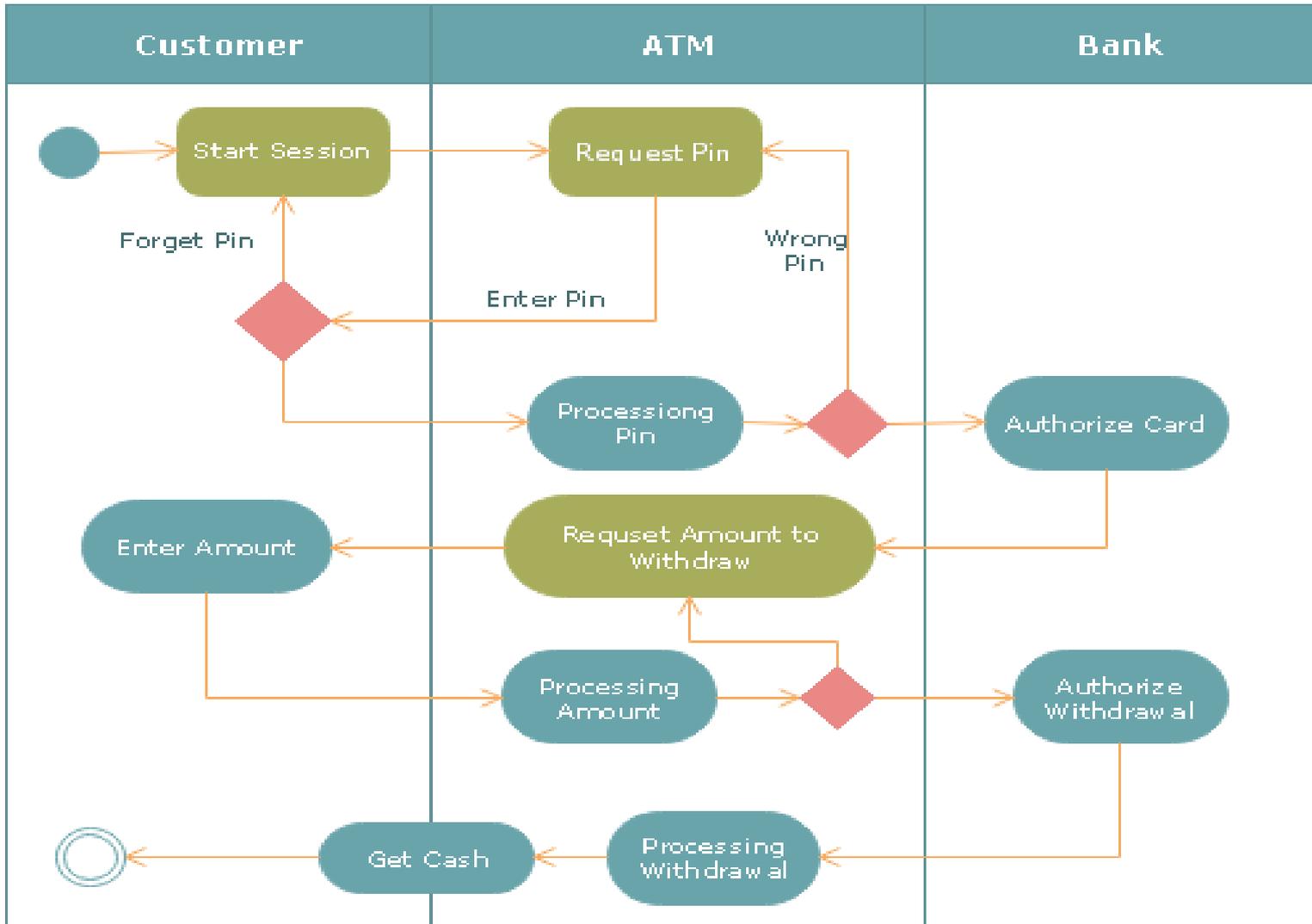


Activity Diagram - Examples



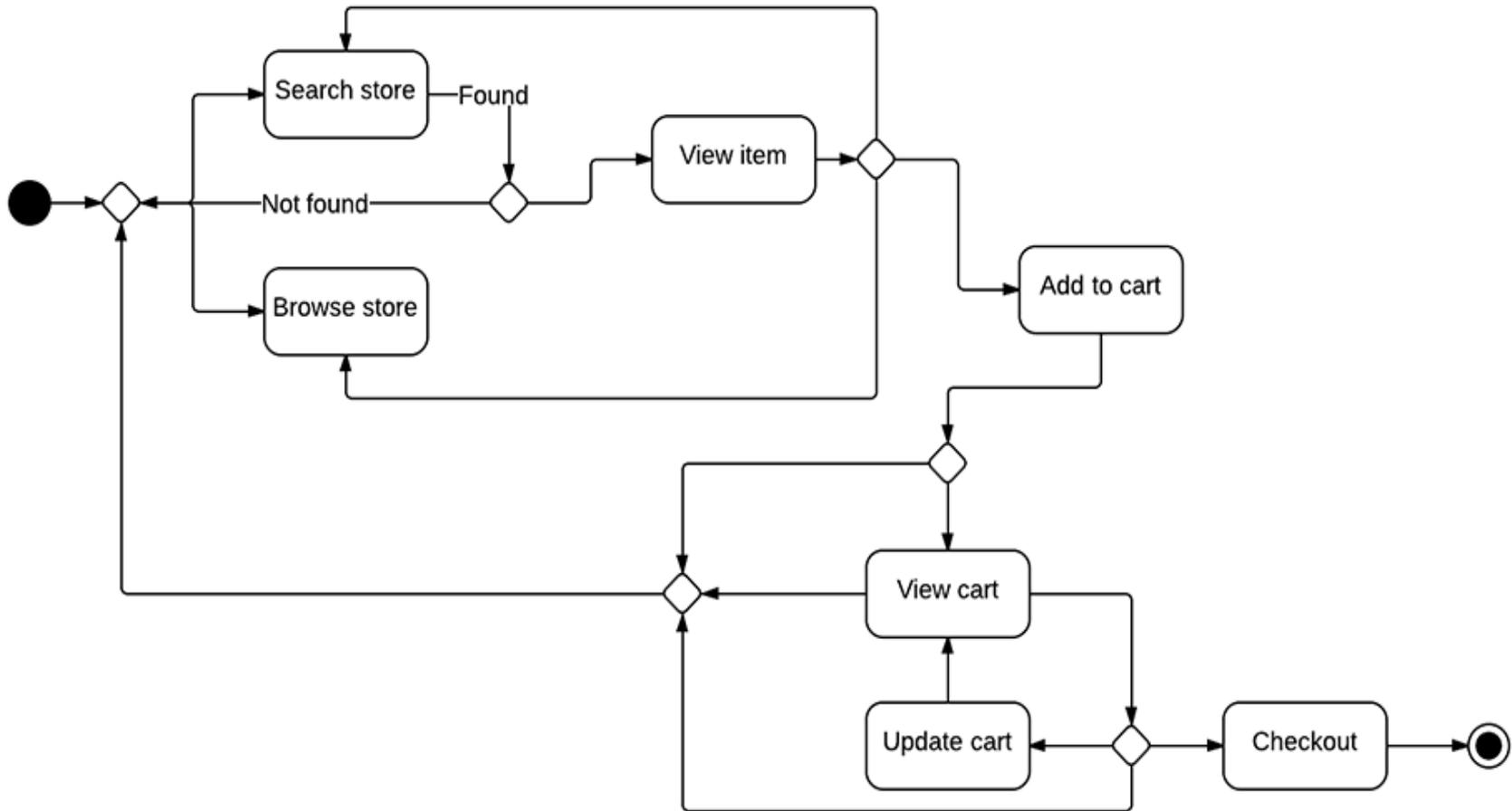


ATM Withdrawal Activity Diagram



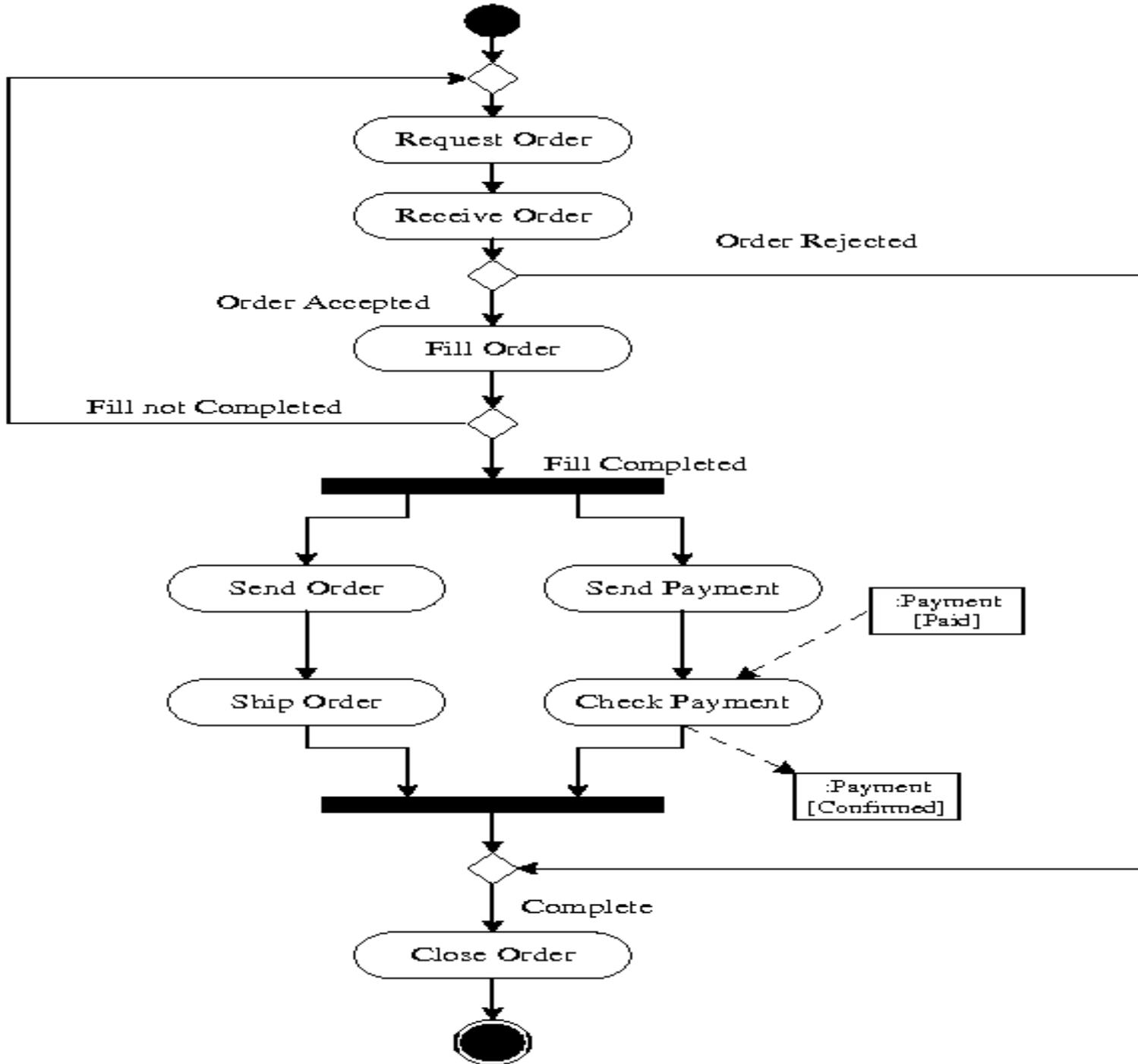


Activity Diagram (Search Store)





Activity Diagram for order system



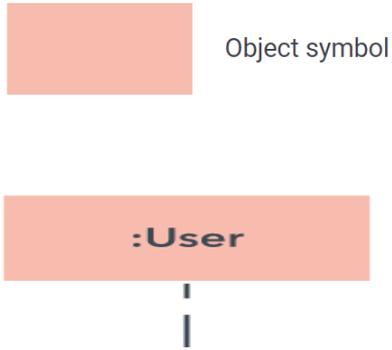


Sequence Diagram

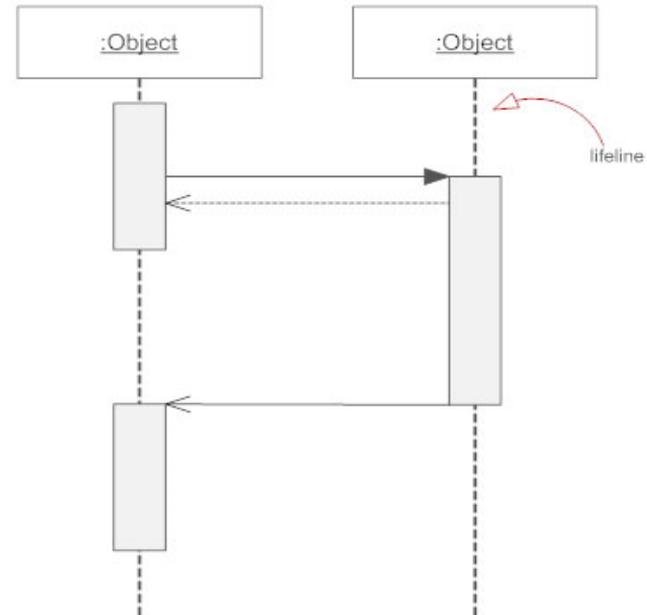
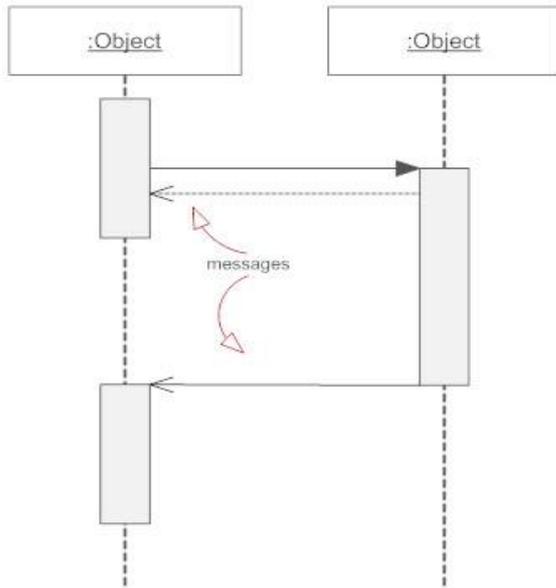
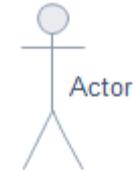
- ❑ A **sequence diagram** describes an interaction among a set of objects participated in a collaboration (or scenario), arranged in a chronological order;
- ❑ It shows the objects participating in the interaction by their "lifelines" and the messages that they send to each other.
- ❑ Sequence diagrams can be useful references for businesses and other organizations.



Basic Sequence Diagram Notations



Activation or Execution Occurrence





Types of Messages in Sequence Diagrams



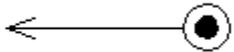
Simple, also used for asynchronous



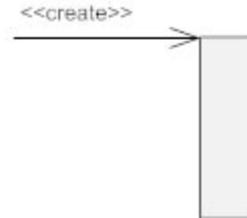
Synchronous



Reply or return message



Found message



Create message



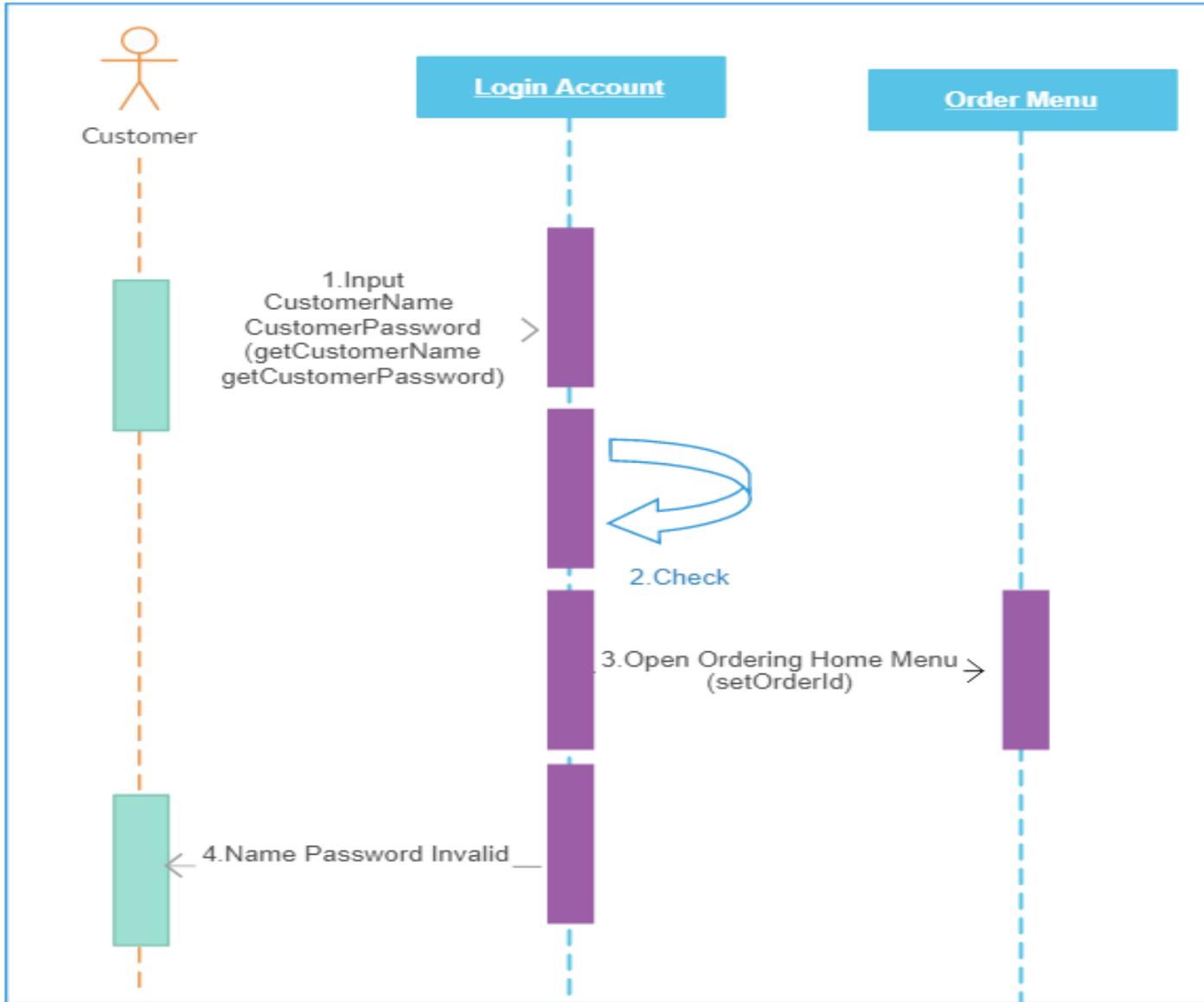
Lost message

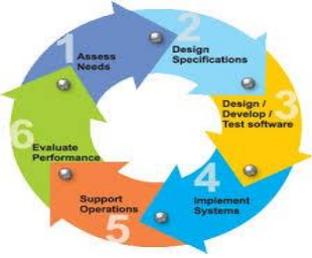


Delete message



Sequence Diagram for Login



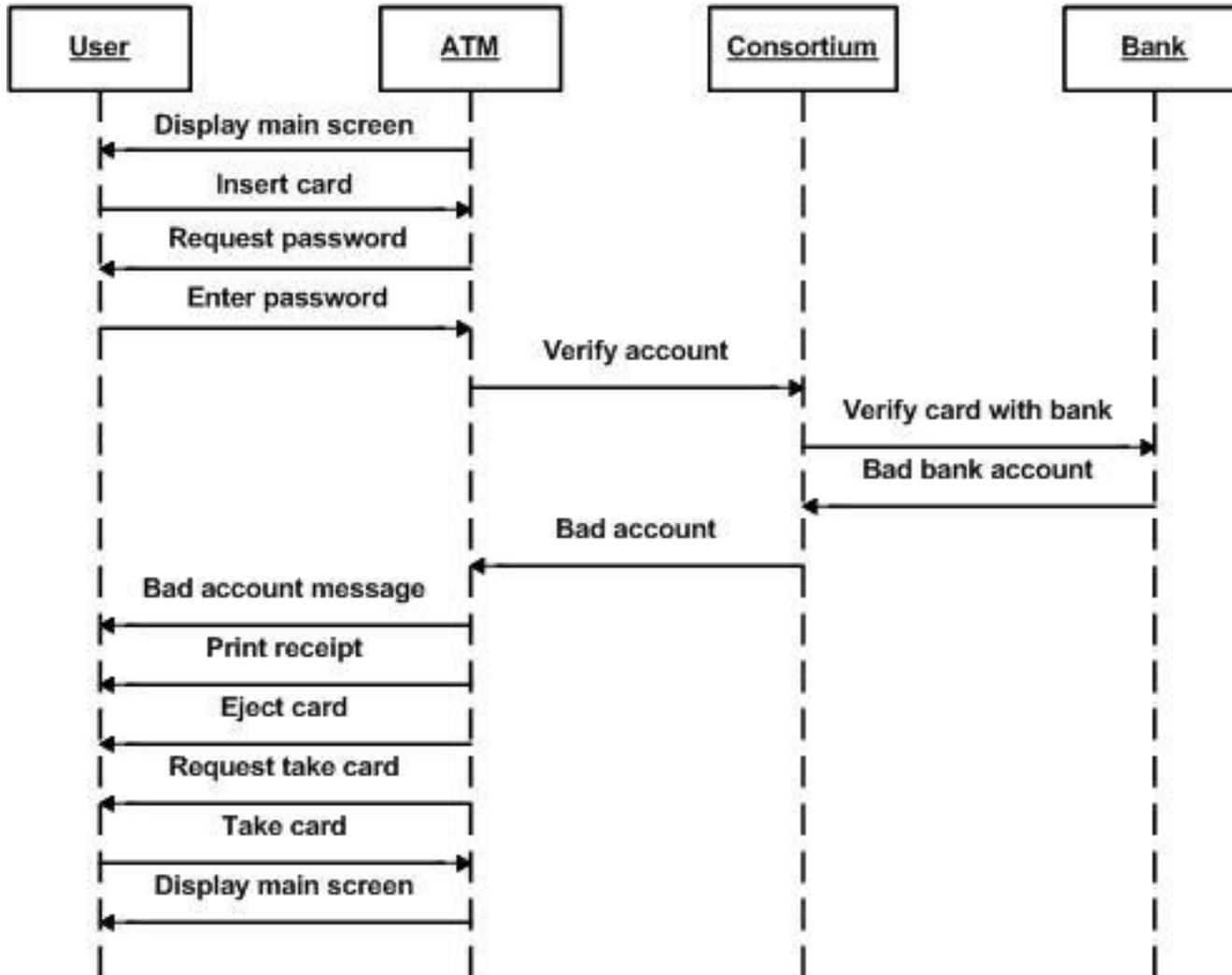


Sequence Diagram of an ATM system

An ATM allows patrons to access their bank accounts through a completely automated process. You can examine the steps of this process in a manageable way by drawing or viewing a sequence diagram. The example below outlines the sequential order of the interactions in the ATM system. Just click to edit the template, and customize the sequence diagram so it suits your own needs.

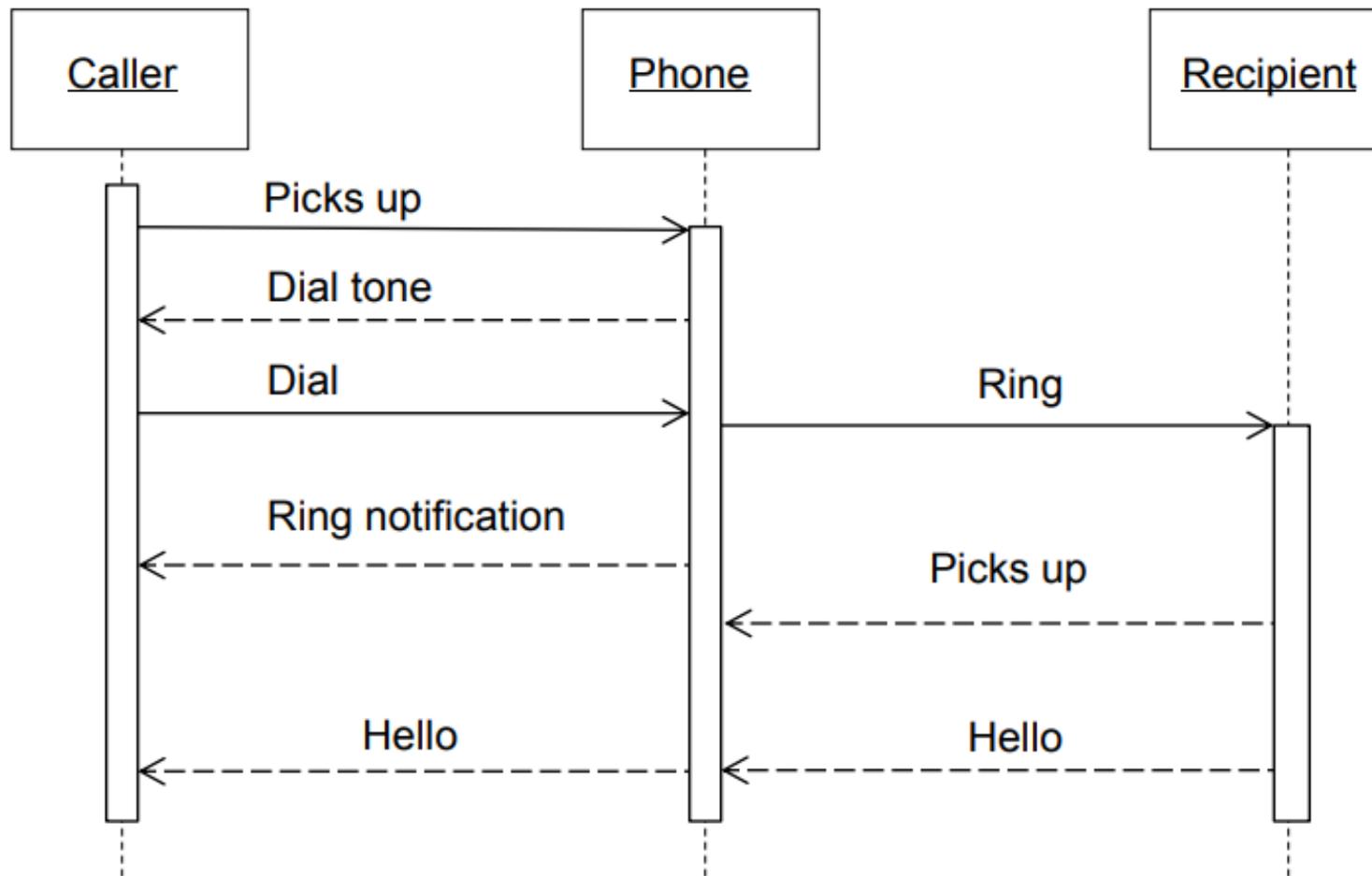


Sequence Diagram of an ATM system



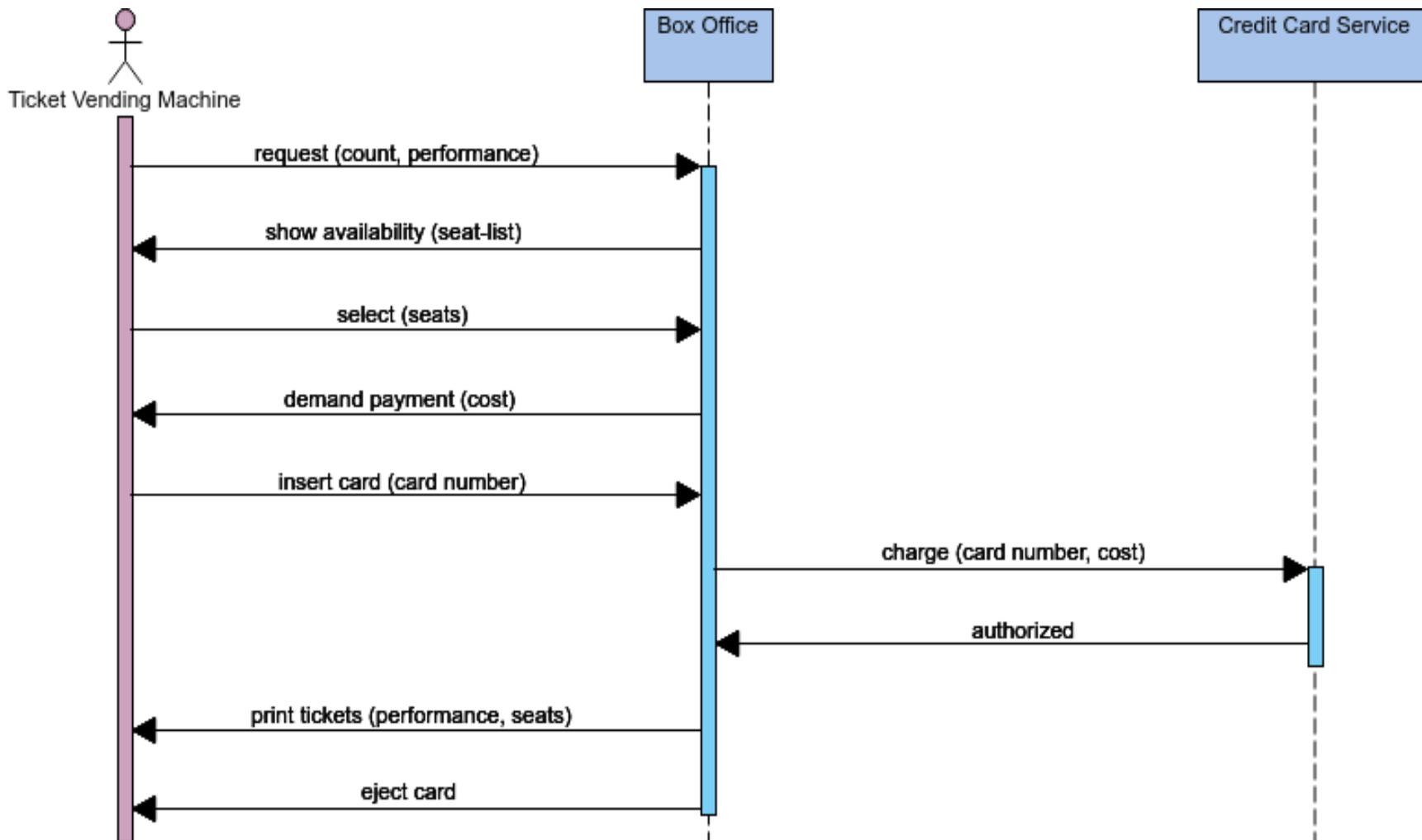


Sequence Diagram (make a phone call)





Sequence Diagram Example: Buy Tickets



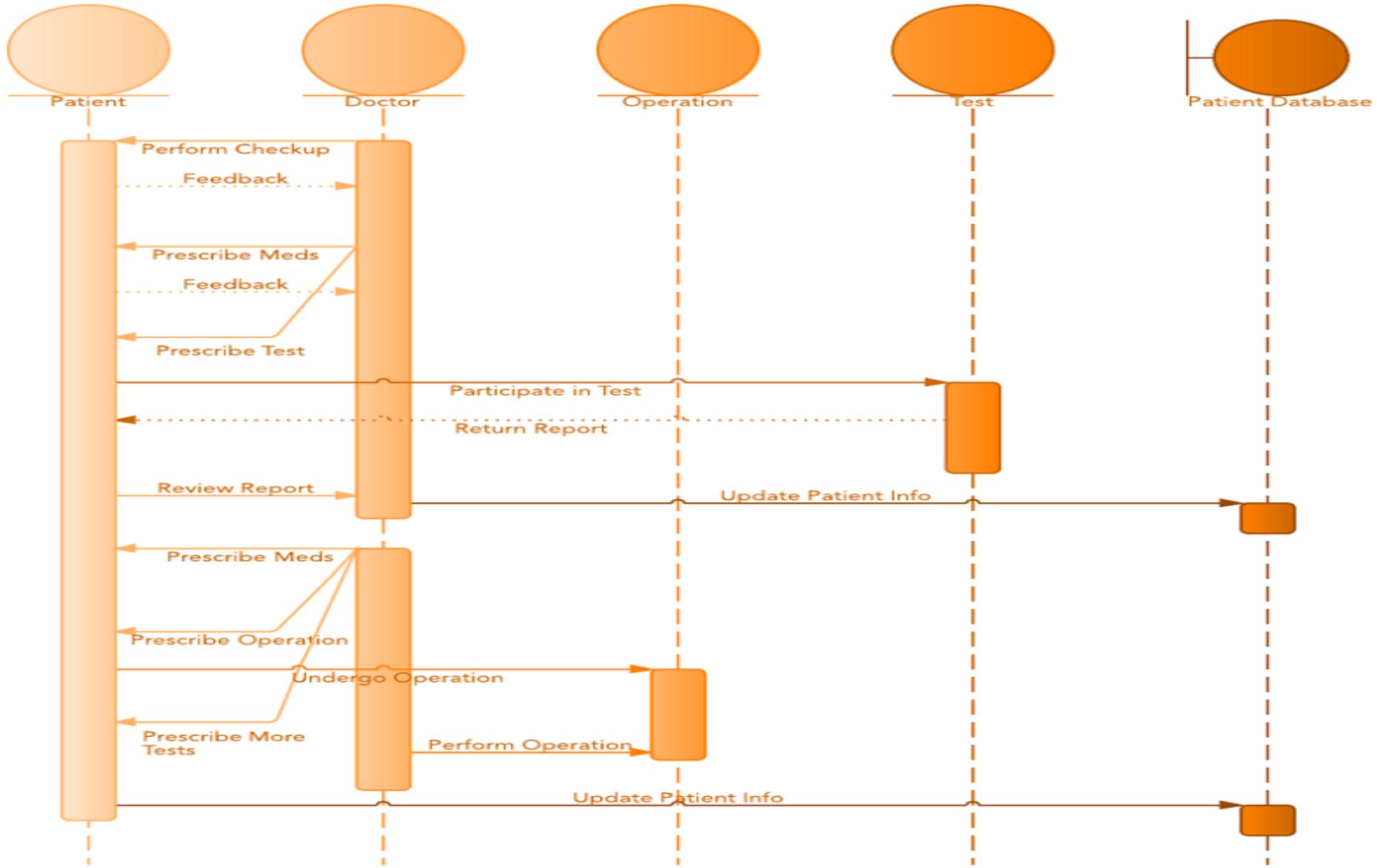


Sequence diagram of a hospital management system

Technology has completely transformed the field of medicine, as it has with most industries. A hospital information system, also known as a hospital information system, helps doctors, administrators, and hospital staff managing all of the activities and information collected at a hospital, including checkups, prescriptions, appointments, and information on the patients and their caretakers. The diagram below provides a simple view of how the primary processes operate with each other over time. You can use Laucidchart to reshape the diagram any way you choose and to share it with your colleagues or collaborators.



Sequence diagram of a hospital management system





□ References:

1. **Software Engineering A practitioner's Approach**

by Roger S. Pressman, 7th edition, McGraw Hill, 2010.

2. **Software Engineering by Ian Sommerville,**

9th edition, Addison-Wesley, 2011