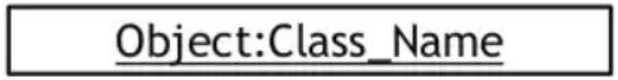
Sequence Diagram

Introduction to Sequence diagram

- Sequence diagram is interaction diagram that shows the set of objects and messages send and receive by those object.
- It mainly emphases on time ordering and messages.
- It is used to illustrate the dynamic view of system.
- These are also called as "Isomorphic diagram".

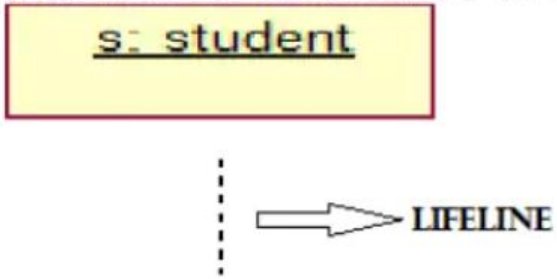
Terms and Concepts

- **Objects or Participants :-**
- The sequence diagram is made up of collection of participants or objects. Participants are system parts that interact each other during sequence diagram.
- The participants interact with each other by sending and receiving message
- The object is represented by as below:



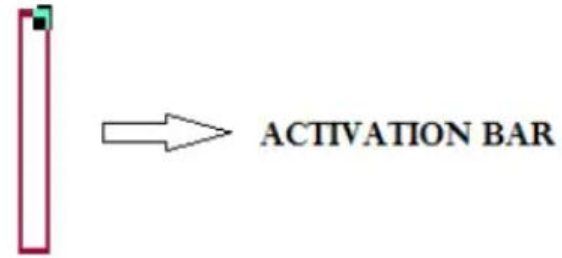
Terms and Concepts

- Lifeline:-
- Lifeline represents the existence of an object over a period of time.
- It is represented by vertical dashed line.
- Most objects that appeared in 'Interaction diagram' will be in existence for the duration of an interaction. So, these objects are aligned at top at top of diagram with their lifeline from top to bottom of diagram.



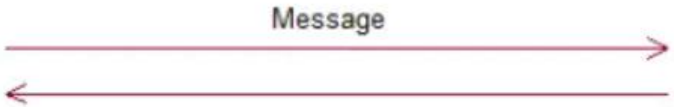
Terms and Concepts

- **Activation bar:-**
- It is also called as focus of control. It shows the period of time during which an object is performing an action.
- The top of rectangle is aligned with start of the action. The bottom is aligned with its completion and can be marked by a written message
- It is represented by tall thin rectangle:



Terms and Concepts

- **Messages:-**
- The interaction in a sequence diagram between the objects can be shown by using messages.
- The messages on sequence diagram are specifies using an arrow from participant that wants to pass the messages to the participant that receive the messages .
- Messages can be flow in whatever direction required for interaction from left to right and right to left.



Terms and Concepts

- **Messages:-**
- It has following kinds of messages:

1)Synchronous messages:-

* It is a message where the sender is blocked and waits until the receiver has finished processing of message.

* It is invoked the caller waits for the receiver to return from the message invocation.

* It is represented by solid line with full arrow.

2)Asynchronous mess

* It is a messages where the sender is not blocked and can continue executing.

* It is represent by solid line with half arrow.

Terms and Concepts

- **Messages:-**
- It has following kinds of messages:

3)Reflexive messages:-

* If the object sends the message to itself then it is called as 'Reflexive message.

* It is represented by solid line wi  of object.

4)Return messages:-

* It can be used at the end of activation bar to show that control flow of activation returns to the participant that pass the original message.

* It is represent by dashed line from sender to receiver.

Terms and Concepts

- Messages:-
- It has following kinds of messages:

5)Create messages:-

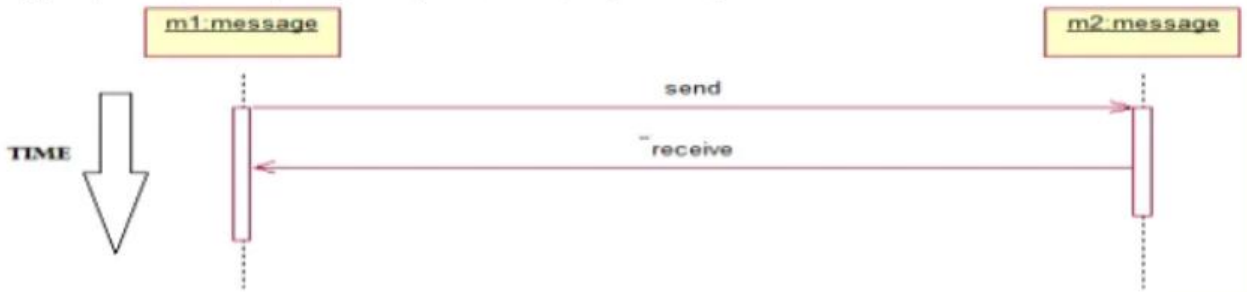
* It is used to create object during interaction.
* The object can be created by using <<create>> to indicate the timing of creation.
* Creating message can be shown as below:

6)Destroy messages:-

* It is used to destroy the objects during interaction.
* The objects can be terminated using <<destroy>>
* It indicates that object named message is termina

Terms and Concepts

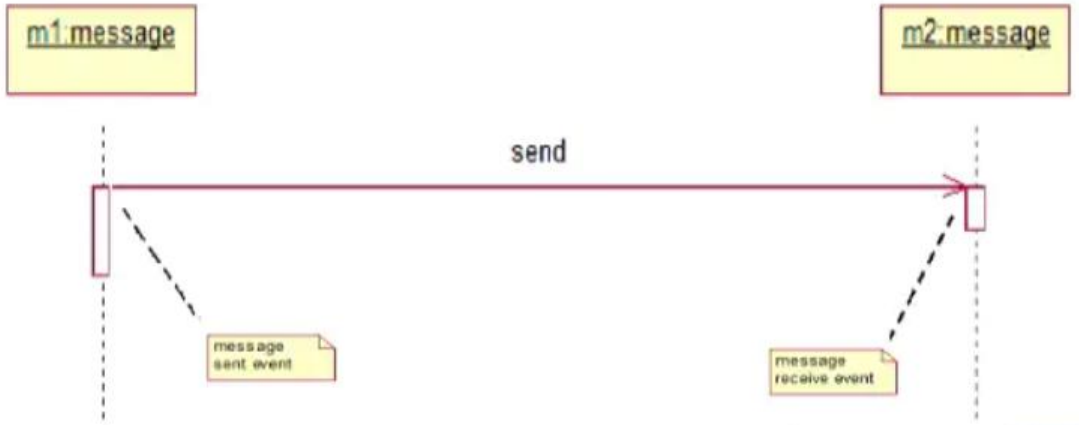
- **Time:-**
- The sequence diagram describes the order in which interaction takes place.
- So time in an important factor. The time on sequence diagram starts at top of the page just below the object and then progress down the page.
- Time is



Terms and Concepts

- **Event:-**

- It can be referred as smallest part of an interaction and event can occur of at any given point in a Time.
- When interaction take place, Events are called as build in blocks for messages and signals.
- Event is created while sending and receiving message.



Sequence diagram of Railway reservation system