1. A message is a one-way communication between two objects, a flow of control   
   with information from a sender to a receiver. A message may have arguments that   
   convey values from the sender to the receiver. A message can be a signal (an explicit,   
   named, asynchronous introject communication) or a call (the synchronous   
   or asynchronous invocation of an operation with a mechanism for later   
   returning control to the sender of a synchronous call).
2. A diagram of objects that shows the relationship between objects at some point in time, that is, provides us with a snapshot of the state of the system. The sequence diagram refers to UML interaction diagrams describing the behavioral aspects of the system, but considers the interaction of objects in time. In other words, the sequence diagram shows the timing of the transmission and reception of messages by objects.
3. The class diagrams used in conjunction with the interaction schemes provides an extremely efficient communication mechanism. We can use the class diagram to illustrate the relationships between classes, and the sequence diagram allows you to display messages sent between instances of these classes and the order in which they were sent. When an object sends a message to another object, this implies that the two classes have a relation that should be displayed in the class diagram.

5.1) State Machine diagram.

5.2) There are initial Pseudostats, Composite State and Triggerless Transition.

6) The state can be characterized in three additional ways: as a set of object values ​​that qualitatively similar in some respects; as a period of time, during which the object is waiting for an event or events that occur; or as a period of time during which the object performs some current activity.

A state can have a name, although it is often anonymous and described simply by its consequences and relationships.

In the effects of state are the units of government, of which state machines are built. The transition shows the path between states, which indicates that a state change, occurs. Trigger, protection status, and the effect is three parts of the transition, all of which are optional.

7.1) Sequence diagram.

7.2) The diagram shows how a Facebook user (FB) can be authenticated in a web application to allow access to his / her FB resources.

7.3) Alternative multiple fragments; only the one whose condition is   
true will execut.