

Sequence Diagram

Sequence diagram

- A sequence diagram is a type of interaction diagram.
- Sequence diagrams are sometimes called **event diagrams** or **event scenarios**
- It describes **how—and in what order—a group of objects** works together.
- A sequence diagram simply depicts interaction between actors, objects in a sequential order i.e. the order in which these interactions take place

Properties

- The diagrams are read left to right and descending.
- A system sequence diagram should specify and show the following
 - External actors
 - Messages (methods) invoked by these actors
 - Return values (if any) associated with previous messages
 - Indication of any loops or iteration area

Major components of a Sequence Diagram

- Actor are represented as



- UML objects are represented as



- Lifeline is an object demonstrating a role



- Classes are listed as columns with vertical lifelines indicating the lifetime of the object over time.

- Activation boxes represent the time required



- Solid arrow heads represent synchronous calls



- Open arrow heads represent asynchronous messages

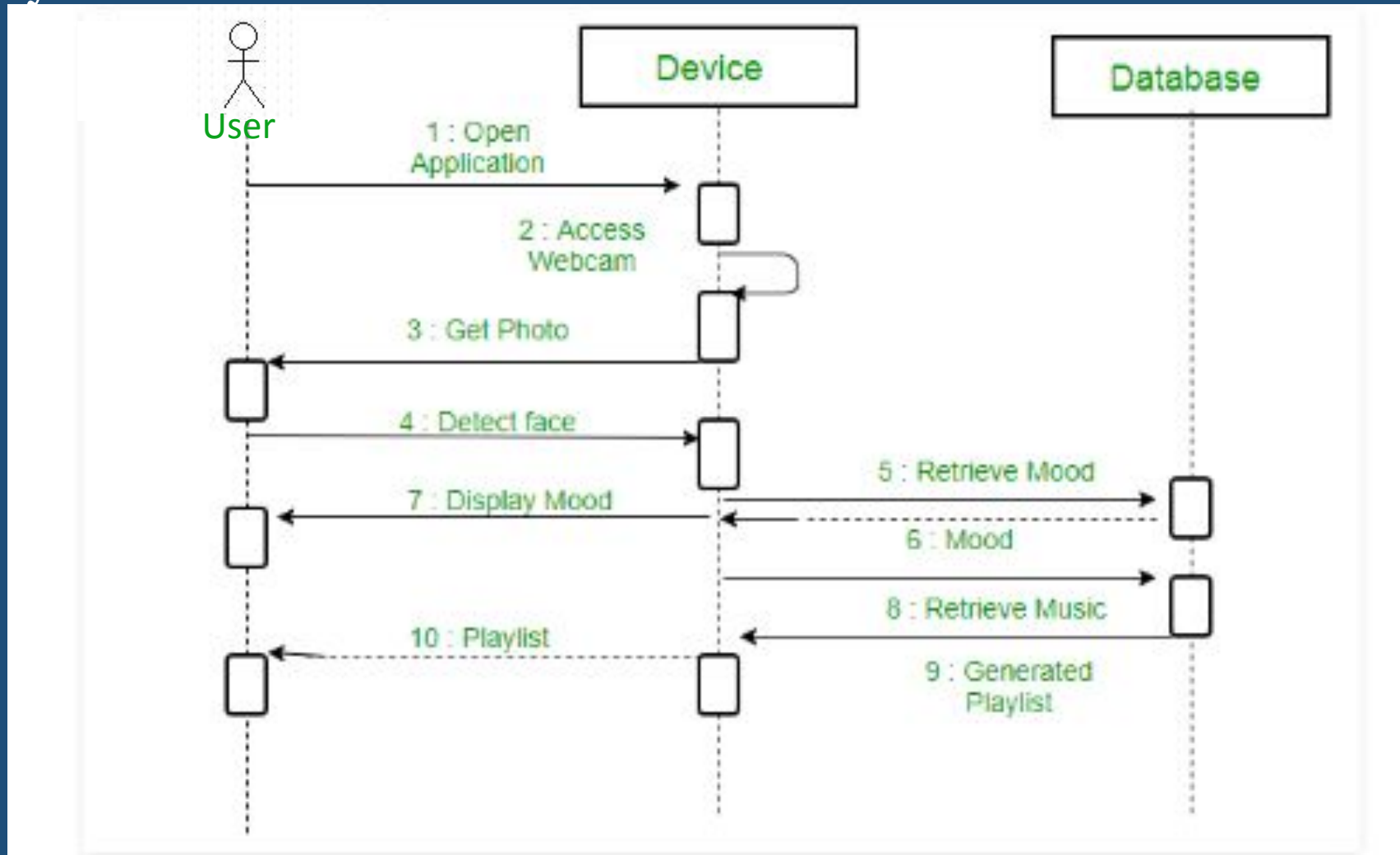


- Dashed lines represent reply messages

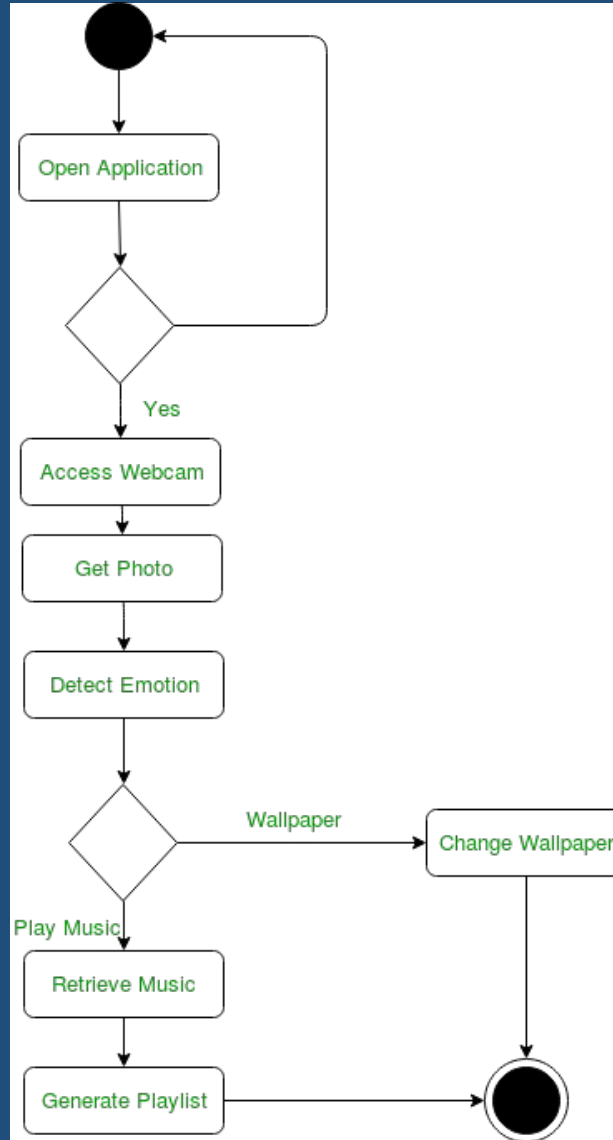


Sequence diagram Example

- Music player based on mood



Sequence diagram Vs Activity Diagram



Sequence diagram Vs Activity Diagram

Sequence diagram	Activity diagram
Used to visualize the sequence of calls in a system that is used to perform a specific functionality.	Used to model the workflow of a system
Shows the message flow from one object to another object.	Shows the message flow from one activity to another.
Used for the purpose of dynamic modelling.	Used for the purpose of functional modelling
Describe the behavior of several objects in a single use case	Describe the general sequence of actions for several objects and use cases.
Mainly used to represent the time order of a process.	Mainly used to represent the execution of the process.

References

- https://en.wikipedia.org/wiki/Sequence_diagram
- <https://www.geeksforgeeks.org/difference-between-sequence-diagram-and-activity-diagram/>
- <https://www.youtube.com/watch?v=UjmcusHEvIA>

Demonstration