



BITS Pilani

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Object Oriented Analysis & Design Module-4 (RL 4.3.1)

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Introduction to State Transition Diagram

Introduction to State Transition Diagram



- A state diagram (also state transition diagram) illustrates the events and the states of things.
- It can be drawn for System, Subsystem or an Object in the System.

Events, States and Transitions



- An event is a trigger, or occurrence.
 - e.g. a telephone receiver is taken off the hook.
- A state is the condition of an entity (object) at a moment in time - the time between events.
 - e.g. a telephone is in the state of being idle after the receiver is placed on the hook and until it is taken off the hook.

Events, States and Transitions



- A transition is a relationship between two states; It indicates that when an event occurs, the object moves from the prior state to the subsequent state.
 - e.g. when an event off the hook occurs, transition the telephone from the idle state to active state.

State Transition Diagrams



- A statechart diagram shows the life-cycle of an object; what events it experiences, its transitions and the states it is in between events.
- A state diagram need not illustrate every possible event; if an event arises that is not represented in the diagram, the event is ignored as far as the state diagram is concerned.
- Thus, we can create a state diagram which describes the life-cycle of an object at any simple or complex level of detail, depending on our needs.