*Practical-6*

**AIM: Development of State Transition Diagram for Software project**

* **State Transition Diagram**

A **State Transition Diagram (STD)** is a visual representation of how an object or system transitions from one state to another based on specific events. It is widely used in software engineering, system modelling, and process design.

It consists of:

* **States**: Conditions of an entity at a given time.
* **Transitions**: The movement from one state to another triggered by an event.
* **Events**: Actions or inputs that cause state changes.
* **Initial & Final States**: The starting and ending points of the system.
* **Key Concepts**
* **Finite State Machine (FSM):** The system has a finite number of states.
* **Deterministic or Non-Deterministic:** A system can have a fixed or multiple paths to transition.
* **Sequential Flow:** Each transition is logically connected and follows a defined sequence.
* **Uses of State Transition Diagrams**
* S**oftware Development**: Used in system design, UI interactions, and process flow mapping.
* **Embedded Systems**: Helps in modelling hardware components like traffic lights, ATMs, etc.
* **Game Development**: Defines player states such as idle, running, jumping, attacking, etc.
* **Business Processes**: Used in modelling customer service workflows, financial transactions, etc.
* **Online Job Portal – State Transition Diagram**
* A screenshot of a phone

  AI-generated content may be incorrect.
* State Transition Diagram for JobSeeker

A black background with white rectangles

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