Assignments
- Doubt
- Backlogs

Practically TS

Active Recall (LLD)
- System Design
- ParkingLot
- Elevator
- Vending Machine
- Tic-Tac-Toe

State Design Pattern
- Documents - Draft, Moderation, Published
- Employee - WFO, WFH, Leave
- Traffic Light - Waiting, Move, Ready to move
  - Pune : t/l based on realtime traffic movement

(HLD)
- Intro to HLD
- Design URL Shortener

Smart Home Automation System

Design a **Smart Home Automation System** using the **State Design Pattern**. The system should manage a **Smart Light**that can be in different states based on user actions and external conditions:

1. **Off State** – The light is turned off.
2. **On State** – The light is turned on manually.
3. **Motion Detection State** – The light turns on automatically when motion is detected.
4. **Brightness Adjustment State** – If it’s daytime, brightness is reduced; at night, it’s increased.

Requirements:

- Implement state transitions for the light based on user input and environmental conditions.
- The system should be scalable, allowing future state additions like "Energy Saver Mode."

Smart Home
User : Motion sensor -> disturb -> light on -> light off
Environment : Motion sensor -> light temp -> adjust brightness

Light - On, Off State, Brightness Adjustment
LightState
Light
User
Client Code
(user, time)

Active Recall System Design
- ParkingLot -> Strategy, Singleton
- Elevator -> State
- Vending Machine -> State
- Tic-Tac-Toe -> State, Builder

Client Code, Arranging your files, CLI (2), Vocabulary, types, Controllers