2200030815
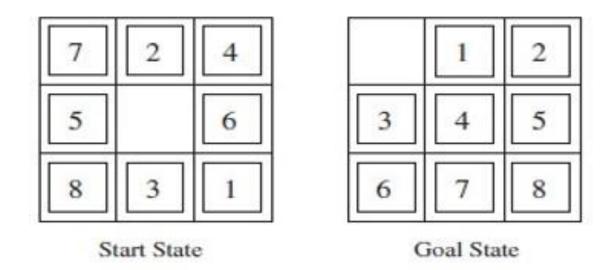
Case Study

# FLIPPED CLASSROOM ACTIVITY-2

# DDAIS – 22AD2001R/A/P Session-2

# Case Study – 1 :

- Example of an Initial Sate and a Goal states:



| 7 | 2 | 4 |
|---|---|---|
| 5 |   | 6 |
| 8 | 3 | 1 |

Start State

|   | 1 | 2 |
|---|---|---|
| 3 | 4 | 5 |
| 6 | 7 | 8 |

Goal State

# Case Study -1: (In class)

- Draw out PEAS model for an 8 Puzzle Game duly bringing out Characteristics of the Agent and the environment in which the agent operates.

| Agent Type | Performance Measure | Environment | Actuators | Sensors |
|---|---|---|---|---|
| 8 puzzle game | Arrange the numbered tiles in a specific order within the puzzle board.<br><br>Number of tiles in the correct position and the number of moves taken to reach the goal state. | 8 Puzzle Game board with a 3x3 grid , eight numbered tiles, along with one empty space, people. | Tile Movement , Board Configuration, Reset Actuator , Solution Path Actuator | Tile Position Sensor, Empty Space Sensor, Goal State Sensor, Obstacle Detection, Environment State Sensor. |

| Environment Characteristics | Observability Level | Number of agents | Whether the Inputs or deterministic or stochastic | Whether the precepts or episodic or continuous | Static / Semi-Dynamic / Dynamic | Whether precepts are discrete or continuous |
|---|---|---|---|---|---|---|
| | Partially Observable | Single | Deterministic | Episodic | Semi-Dynamic | Discrete |

| Agent Particulars | |
|---|---|
| Agent type | Single-Agent |
| Functions | Perception |
| | Decision Making |
| | Action |
| | Apply search algorithm |
| Initial State | Initial sate at the starting point |
| Goal States | Goal state at the destination point |
| Intermediate States | Breaking State |
| Actions to be taken | move tile up, move tile down , move tile left, and move tile right. |