CSL 412 - Artificial Intelligence

Assignment 1

- **Problem Statement**:- Implement a problem solving agent to solve the 8 tile puzzle using state space exploration by Iterative Deepening Search(IDS) strategy.

  - Input :- Generate random tile configurations. Apply parity check on the configuration generated. If it comes out to be solvable proceed with the search else generate a new configuration.

  - Output :-
    1) Print the sequence of moves from initial state to goal state configuration.
    2) Print the number of nodes expanded during the entire search.

  - Coding Language :- (any)

  - Deadline (online submission) :- till 11:59 pm on 31th Aug, 2025 (Sunday)

  - Submit your code at – uad.ai.assignment@gmail.com

  - Write your name, enrollment number and Assignment 1 in the subject of the email.

  - There will be an in-person evaluation after the submission. Submission is deemed to be complete only after the in-person evaluation.

  - Viva Dates :- 2nd Sept,2025 (Tuesday 2-4 pm)

- **Bonus Task** :- Implement an agent for the same problem statement using Bidirectional Search strategy (for extra credits).