

Week 2 output.

8 puzzle problem.

```
Enter the initial state of the 8-puzzle (0 for empty space):  
Enter row 1 (space-separated): 1 2 3  
Enter row 2 (space-separated): 4 5 0  
Enter row 3 (space-separated): 6 7 8  
Solving using DFS...  
DFS Completed.  
Time taken by DFS: 30.649966 seconds
```

Iterative Deepening Search.

```
Enter the initial state: A  
Enter the goal state: F  
Enter the adjacency list for the graph (neighbors of each node).  
Type 'done' when finished.  
Enter node (or 'done' to finish): A  
Enter neighbors of A separated by spaces: B C  
Enter node (or 'done' to finish): B  
Enter neighbors of B separated by spaces: A D  
Enter node (or 'done' to finish): C  
Enter neighbors of C separated by spaces: A E  
Enter node (or 'done' to finish): D  
Enter neighbors of D separated by spaces: B F  
Enter node (or 'done' to finish): E  
Enter neighbors of E separated by spaces: C F  
Enter node (or 'done' to finish): E  
Enter neighbors of E separated by spaces: D E  
Enter node (or 'done' to finish): done  
Exploring depth: 0  
Exploring depth: 1  
Exploring depth: 2  
Exploring depth: 3  
Exploring depth: 4  
Solution Path: ['A', 'C', 'E', 'D', 'F']
```