CECS 545 Project 2 report

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**Introduction**

In Project 1 we implemented a brute-force solution to find the least cost Hamiltonian Cycle in a fully connected, undirected graph. This NP-Hard problem is typically solved in a manner that is optimized for different performance metrics such as run time, or accuracy. In this project, we solve a TSP variant in which the start and end state is fixed, and the graph is directed and no longer fully connected. Two approaches are taken in this implementation.

The first approach is a Breadth-First Search, which examines the search tree in a wide manner. The second approach is a Depth-First Search of the state tree, which attempts to follow a path until the goal is reached or the search must back track. These methodologies will find the best cost path in the given graph and will be compared for their cost in solving the problem.

**Running the Program**

**Code Description**

**Code Performance**

**Conclusions**