

Run Main to start the program

This program will generate a terrain map, and has multiple algorithms to find the shortest path between 2 points. The algorithms at the end will be compared to each other based on their weighted “Simulated Time” and their “Real Time”, and an analysis will show which algorithms did the best. The terrain is weighted so that going up-hill penalizes the algorithm, and going down-hill rewards the algorithm by augmenting the cost of moving from one node to the other. So, the algorithms are encouraged to stay on a level platform, and go downhill when possible. Most of the time, A* does the best overall job at finding a good path, but sometimes Best-First has a better overall score because it’s incredibly fast. Sometimes Best-First would rather go uphill than go around a hill, which is why it tends to have a higher simulated time.

Users can:

- Enter a number of rows/columns, and Generate a Graph
- Modify the max height of the terrain which influences cost of traversal
- Find Paths through the graph using Dijkstra’s algorithm, A*, Best-First, and Breadth First Search.

The UML image file will be included in the submitted content since it’s hard to read

