Conner Thomas

Nick Morello

CSE373

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Homework 5 Write Up

1. Runtime of:

adjacentVertices(): O(1) since it’s a Map lookup

edgeCost(): O(|E|) since it uses a for-each loop and iterates over every edge

shortestPath(): O(|V|) because it at most sees every vertex

2. Our code preserves abstraction because it deep-copies the collections that are passed into myGraphs before doing anything else.

3. To test our code we mostly just used the FindPath class that was provided, and used Eclipse’s debugger when things weren’t working and even when they were in order to be positive that everything was behaving the right way. We also used a different simple graph testing code to test the other methods in the code such as edgeCost().

4. We worked together on writing the code and didn’t really split it up as we went along. We sat down at the same desk and bounced ideas off each other while one of us wrote the code. It took about 8 hours total time from starting to getting the program working. About 4 hours of that was spent writing the bulk of the code while the rest was spent debugging and testing it. Working with a partner is nice because we have twice the brainpower to solve the problem. The only trouble we ran into was finding time to get together and work on it over the weekend since our schedules differ significantly.

5. N/A