Final Project for CS 372

***Erase this*** *before you submit: You are more than welcome to bullet point or tabulate everything like in the first heading and Built-in tests. I’m going to be “checking” off what I can from the report, and the easier it is to find, the less likely a requirement will be missed.*

*[Your name]*

# Algorithm, Application, Language Choice

* *[Your algorithm choice]*
* *[Your application choice]*
* *[Your language choice]*

# Where It Is Used

*[Brief description of the class of problems your algorithm(s) solves, at least 2 other possible applications for your algorithm, and at least 2 other possible algorithms for your application. Compare and contrast the algorithms, and explain why you made your choice. 1-2 short paragraphs is sufficient]*

# Validate Theoretical Correctness

*[Justify you algorithm is correct. This can be formal with high level proofs or “chunking” the algorithm and explaining why each part works and is correct. Pretend you are explaining how it works to a freshman who first coded 8 weeks ago. 1 paragraph will likely be sufficient, but ask if you are unsure]*

# Run time

*[Name and explain/prove the theoretical run time]*

*[A* ***fully*** *labeled graph of runs with varying runs should go here]*

*[Compare and contrast your graph to the theoretical run time]*

# Built-in Code Correctness Tests

|  |  |  |  |
| --- | --- | --- | --- |
| ***Test Case*** | ***Description*** | ***Input*** | ***Actual output*** |
| *[test 1]* |  |  |  |
| *[test 2]* |  |  |  |
| … |  |  |  |

# References