# CS 211 PA #2

In this task, you will implement a program that estimates travel times between buildings on campus. At minimum, your program will use the information collected by the class to prompt the user for two campus location codes (e.g. ARTA, BSS) and calculate the estimated shortest travel time using Dijkstra's algorithm.

## Tier-1 Submissions

At the most basic submission level, your program must compute the shortest path between the two supplied destinations. For example:

|  |
| --- |
| \*\*HSU Transit Time Calculator\*\*  Enter starting location: **WDFS**  Enter destination: **BSS**  Estimated travel time: 5 minutes |

## Tier-2 Submissions

At the 2nd submission level, your program must indicate which buildings you are likely to pass by on your way between the two destinations. A Tier-2 submission is required to receive 100% on the assignment. Example:

|  |
| --- |
| \*\*HSU Transit Time Calculator\*\*  Enter starting location: **NHE**  Enter destination: **MUSB**  Estimated travel time: 3 minutes  On your way from Nelson Hall East to Music B, you will pass by: Siemens Hall, Music A |

## Tier-3 Submissions

Tier-3 submissions give actual directions. Note that completing this tier will require you to build a more detailed street-level graph to accompany your time estimate graph. This level is considered to be extra credit. Example:

|  |
| --- |
| \*\*HSU Transit Time Calculator\*\*  Enter starting location: **BSS**  Enter destination: **SBS**  Estimated travel time: 6 minutes  Head north on Union Street.  Turn left (east) on 17th Street  Turn right (north) on B Street  Arrive at Student & Behavioral Services |

## Header Comment, and Formatting

1. Be sure to modify the file header comment at the top of your program to indicate your name, student ID, completion time, and the names of any individuals that you collaborated with on the assignment.
2. Remember to follow the basic coding style guide. For a list of basic rules, [see my website](http://adamcarter.com/teaching/cpts121/style) or examine my example files from previous assignments and labs.

## Reflection Essay

In addition to the programming tasks listed above, your submission must include an essay that reflects on your experiences with this homework. This essay must be at least 350 words long. Note that the focus of this paper should be on your reflection, ***not*** on structure (e.g. introductory paragraph, conclusion, etc.). The essay is graded on content (i.e. it shows deep though) rather than syntax (e.g. spelling) and structure. Below are some prompts that can be used to get you thinking. Feel free to use these or to make up your own.

* Describe a particular struggle that you overcame when working on this programming assignment.
* Conversely, describe an issue with your assignment that you were unable to resolve.
* Provide advice to a future student on how he or she might succeed on this assignment.
* Describe the most fun aspect of the assignment.
* Describe the most challenging aspect of the assignment.
* Describe the most difficult aspect of the assignment to understand.
* Provide any suggestions for improving the assignment in the future.

## Deliverables

The final version of your program must be uploaded through Canvas no later than midnight on Monday, February 25, 2019.

## Grading Criteria

This assignment is worth 100 points. Your assignment will be judged by the following criteria:

### Tier 1 (70pts)

* Your program meets tier 1 requirements

### Tier 2 (30pts)

* Your program meets tier 2 requirements

### Tier 3 (50 BONUS)

* Your program meets tier 3 requirements