C950 Task-2 WGUPS Write-Up

(Task-2: The implementation phase of the WGUPS Routing Program).

(Zip your source code and upload it with this file)

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C950 Data Structures and Algorithms II

# A. Hash Table

Hash Table Screenshot goes here

# B. Look-Up Functions

Look-up function screenshot goes here

# C. Original Code

Major code blocks screenshots go here showing implementation

# C1. Identification Information

main.py screenshot goes here showing Student ID

# C2. Process and Flow Comments

Some code blocks screenshots go here showing comments

# D. Interface

Interface screenshot goes here

# D1. First Status Check

Screen shot goes here

# D2. Second Status Check

Screenshot goes here

# D3. Third Status Check

Screenshot goes here

# E. Screenshot of Code Execution

Screenshot goes here

# F1. Strengths of the Chosen Algorithm

# F2. Verification of Algorithm

For my project, I used the nearest neighbor algorithm. Some of the strengths of this algorithm include simplicity, low time complexity, and local optimality. One of the biggest strengths of this algorithm is that it is simple, not only to look at but to implement as well. It is straightforward, making it accessible and understandable. It has a low time complexity, especially when using smaller data sets, making it practical and efficient. Finally, it quickly selects the nearest available option, giving it the advantage in scenarios where a global solution is not necessarily needed.

# F3. Other Possible Algorithms

This algorithm meets all requirements in the scenario because it updates the delivery process as deliveries are being made. It dynamically allocates the next package needed for delivery for the optimal total mileage of each truck.

# F3a. Algorithm Differences

# G. Different Approach

Text goes here

# H. Verification of Data Structure

Text goes here

# H1. Other Data Structures

Text goes here

# H1a. Data Structure Differences

Text goes here

# I. Sources

Text goes here

An example:

Lysecky, R., & Vahid, F. (2018, June). *C950: Data Structures and Algorithms II*. zyBooks.

Retrieved March 22, 2021, from <https://learn.zybooks.com/zybook/WGUC950AY20182019/>

# J. Professional Communication