Test Plan of Delivery Routes Project

Local Delivery Company

# Introduction

Seneca Deliveries is a local delivery company which has three different trucks that deliver on three different touts in one region of the city. The map of the delivery region is represented as a 25 by 25 square gird.

All the trucks can hold up to 1000 kilograms of cargo and the capable of carrying 26 cubic meters of boxes.

Seneca Deliveries want to build a software application to find a truck which is big enough to hold the shipment as well as finding a truck which is going to as close as possible to the destination of the package.

Our team is to test the application to make sure when a shipment comes in, it can print pick up the right truck and shortest root for the diver to deliver the packages.

# Scope

Below is the main function and we need to test all items are working properly.

The overall algorithm will

* follow the route for each of the trucks.
* At every square on the route for each truck it will calculate the Euclidean distance to the destination.
* It will select the minimum Euclidean distance for each of the trucks and then calculate the shortest path from each of those positions to the destination.
* In the event one of the trucks cannot find a path to the destination, that truck will not be used for the delivery and one of the other trucks will be used.
* Finally, it will select the truck which has the shortest path from the nearest point on its route to the destination and attempt to add the package to that truck.
* If that truck cannot hold the package, it will try to put it in the truck that is next closest to the destination.
* If no truck can take the package, it will be placed in storage at the depot until the trucks return empty and it will be shipped out the next day. It will print the message “Ships tomorrow”.

Our algorithm will run for one day. This means we accept items until all trucks are full or items stop arriving. Once this happens, the trucks will be dispatched but that is not the responsibility of the program. All the program needs to do is:

* Decide which truck the package will be placed in,
* Print out where the truck will deliver the package,
* If the truck needs to divert to deliver the package, you will print the path to divert.

# Test Strategy

## Blackbox Test

## WhiteBox Test

## Integration Test

## Acceptance Test

# Test Schedule

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Plan No.** | **Plan Desc** | **Start Date** | **End Date** | **Resources** |
| **1** | **Blackbox Test** | **2023-04-03** | **2023-04-28** | **QA Team** |
| 1.1 | Document Test Cases | 2023-04-03 | 2023-04-07 |  |
| 1.2 | Execute Test Cases | 2023-04-10 | 2023-04-21 |  |
| 1.3 | Review Results | 2023-04-24 | 2023-04-28 |  |
| **2** | **WhiteBox Test** | **2023-05-01** | **2023-05-26** | **QA Team** |
| 2.1 | Document Test Cases | 2023-05-01 | 2023-05-05 |  |
| 2.2 | Execute Test Cases | 2023-05-08 | 2023-05-19 |  |
| 2.3 | Review Results | 2023-05-22 | 2023-05-26 |  |
| **3** | **Integration Test** | **2023-06-05** | **2023-06-30** | **QA Team** |
| 3.1 | Document Test Cases | 2023-06-05 | 2023-06-09 |  |
| 3.2 | Execute Test Cases | 2023-06-12 | 2023-06-23 |  |
| 3.3 | Review Results | 2023-06-26 | 2023-06-30 |  |
| **4** | **Acceptance Test** | **2023-07-03** | **2023-07-28** | **Business Users** |
| 4.1 | Document Test Cases | 2023-07-03 | 2023-07-07 |  |
| 4.1 | Execute Test Cases | 2023-07-10 | 2023-07-21 |  |
| 4.3 | Review Results | 2023-07-24 | 2023-07-28 |  |
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