# Test Description

**Test Name or ID**: CreateTruck Black-box Test

**Test Type**: Black box

**Description**: This function creates a new object of type Truck and initializes its attributes based on the provided parameters. The function returns a newly created Truck object with its attributes set according to the provided arguments.

**Test Function**: CreateTruck

**Test Scenarios:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | Test Data | Expected Result | Actual Result | Pass/Fail |
| Blackbox test using CT01 test data | CT01 | 0 |  |  |
| Blackbox test using CT02 test data | CT02 | 0 |  |  |
| Blackbox test using CT03 test data | CT03 | -1 |  |  |
| Blackbox test using CT04 test data | CT04 | -1 |  |  |
| Blackbox test using CT05 test data | CT06 | -1 |  |  |
| Blackbox test using CT06 test data | CT07 | -1 |  |  |
| Blackbox test using CT07 test data | CT08 | -1 |  |  |

**Bugs Found**:

Tests have not been conducted yet.

# Test Description

**Test Name or ID**: FindClosestTruck Black-box Test

**Test Type**: Black box

**Description**: This function is to find the closest truck to the destination and return the index of the truck. If no truck is found, the function will return -1. For the black box testing, we are going to set the index of the closest truck to a certain number, and going to observe if the function is returning the expected value (a returning value should be the index number of the truck that we set.)

**Setup:** How to set up the environment to carry out the test.

**Test Function**: FindClosestTruck

**Test Scenarios:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | Test Data | Expected Result | Actual Result | Pass/Fail |
| Blackbox test using FCT01 test data | FCT01 | 0 | - |  |
| Blackbox test using FCT02 test data | FCT02 | 1 |  |  |
| Blackbox test using FCT03 test data | FCT03 | 2 |  |  |
| Blackbox test using FCT04 test data | FCT04 | -1 |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**Bugs Found**:

Description of each bug found above and how to reproduce it.

# Test Description

**Test Name or ID**: FindTruckForShipment Black-box Test

**Test Type**: Black box

**Description**: This function is to find the best truck for shipment and return the index of the truck. If no truck is found, the function will return -1. For black box testing, we are going to set the index of the truck that has the most space and the closest to the destination to the certain number, and going to observe if the function is returning the expected value (a returning value should be the index number of the truck that we set.)

**Setup:** How to set up the environment to carry out the test.

**Test Function**: FindTruckForShipment

**Test Scenarios:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | Test Data | Expected Result | Actual Result | Pass/Fail |
| Blackbox test using FTS01 test data | FTS01 | 1 |  |  |
| Blackbox test using FTS02 test data | FTS02 | 1 |  |  |
| Blackbox test using FTS03 test data | FTS03 | -1 |  |  |
| Blackbox test using FTS04 test data | FTS04 | -1 |  |  |
| Blackbox test using FTS05 test data | FTS05 | -1 |  |  |
| Blackbox test using FTS06 test data | FTS06 | -1 |  |  |
|  |  |  |  |  |

**Bugs Found**:

Tests have not been conducted yet.

# Test Description

**Test Name or ID**: addPackageToTruck Black-box Test

**Test Type**: Black box

**Description**: This function is designed to check if a package can fit into a truck and, if it can, add the package to the truck for shipping. If the package has been successfully loaded onto the truck, then return 0, otherwise return -1.

**Setup:** How to set up the environment to carry out the test.

**Test Function**: addPackageToTruck

**Test Scenarios:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | Test Data | Expected Result | Actual Result | Pass/Fail |
| Blackbox test using APT01 test data | APT01 | -1 |  |  |
| Blackbox test using APT02 test data | APT02 | 0 |  |  |
| Blackbox test using APT03 test data | APT03 | -1 |  |  |
| Blackbox test using APT04 test data | APT04 | -1 |  |  |
| Blackbox test using APT05 test data | APT05 | -1 |  |  |
| Blackbox test using APT06 test data | APT06 | -1 |  |  |
|  |  |  |  |  |

**Bugs Found**:

Tests have not been conducted yet.

# Test Description

**Test Name or ID**: IsValidSize Black-box Test

**Test Type**: Black box

**Description**: This function is to validate the size of the package that was entered by the client. Size should be equal to 1/4, 1/2, or 1. The function should return 0 if the size is valid, otherwise it should return -1. For black box testing, we are going to create Box struck with various size values(and send is as parameter) and going to observe if the function is returning the expected value.

**Setup:** Size should be equal to 1/4(0.25), 1/2(0.5), or 1.

**Test Function**: isValidSize

**Test Scenarios:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | Test Data | Expected Result | Actual Result | Pass/Fail |
| Blackbox test using VS01 test data | VS01 | 0 | - | - |
| Blackbox test using VS02 test data | VS02 | 0 | - | - |
| Blackbox test using VS03 test data | VS03 | 0 | - | - |
| Blackbox test using VS04 test data | VS04 | -1 | - | - |
| Blackbox test using VS05 test data | VS05 | -1 | - | - |
| Blackbox test using VS06 test data | VS06 | -1 | - | - |
|  |  |  |  |  |

**Bugs Found**:

Tests have not been conducted yet.

# Test Description

**Test Name or ID**: IsValidWeight Black-box Test

**Test Type**: Black box.

**Description**: This function is to validate the weight of the package that was entered by the client. The function should return 0 if the weight is valid, otherwise it should return -1. For black box testing, we are going to create Box structs with various weight values, and going to observe if the function is returning the expected value.

**Setup:** MIN\_WEIGHT = 1, MAX\_WIEHGT = 1000

**Test Function**: IsValidWeight

**Test Scenarios:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | Test Data | Expected Result | Actual Result | Pass/Fail |
| Blackbox test using VW01 test data | VW01 | -1 | - | - |
| Blackbox test using VW02 test data | VW02 | 0 | - | - |
| Blackbox test using VW03 test data | VW03 | 0 | - | - |
| Blackbox test using VW04 test data | VW04 | 0 | - | - |
| Blackbox test using VW05 test data | VW05 | 0 | - | - |
| Blackbox test using VW06 test data | VW06 | -1 |  |  |
| Blackbox test using VW07 test data | VW07 | -1 |  |  |

**Bugs Found**:

Tests have not been conducted yet.

# Test Description

**Test Name or ID**: IsValidDestination Black-box Test

**Test Type**: Black box

**Description**: This function is to validate the destination of the package that was entered by the client. The function should return 0 if the destination is valid, otherwise it should return -1. For black box testing, we are going to create Box structs with various destination values, and going to observe if the function is returning the expected value.

**Test Function**: IsValidDestination

**Test Scenarios:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | Test Data | Expected Result | Actual Result | Pass/Fail |
| Blackbox test using VD01 test data | VD01 | 0 |  |  |
| Blackbox test using VD02 test data | VD02 | -1 |  |  |
| Blackbox test using VD03 test data | VD03 | -1 |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**Bugs Found**:

Tests have not been conducted yet.