# Test Report

**Project Name:** Box Delivery System

**Test Type**: Black box, White Box, Integration, Acceptance,

**Description**: We signed the contract for this project on October 25, 2024, and it took seven weeks to complete. To check if the functions and requirements function as intended, we have created numerous requirements, new functions, and test cases. Of the forty-six test cases, forty-three are operational, and three are generating errors. We develop eight distinct functions to support our project. We needed to cover seven different requirements. Our contract is now over. We are on schedule to turn in the full project. in a specific amount of time. We must start a new contract to work on fixing the errors and improving the code if the client wants us to fix the ones we still have.

**Functions:** isValidWeight, isValidSize, isValidDestination, calculateRemainingTruckCapacity, canTruckHandleShipmen, generateDiversions, assignShipmentToTruck , manageShipment

**Requirements:**

R001 = max weight on truck cannot be > 2000 kg,

R002 = get the shortest path,

R003= truck can carry 20 cubic meter of boxes,

R004= the boxes 1/2 cubic, 1 cubic meter and 2 cubic meter size,

R005= all boxes need to be square,

R006= the destination of the box by row and column number,

R007= truck cannot drive through any of the black building

**Report Prepared By:** Eda Nur Yilmaz

**Date:** 03 December 2024

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| --- | --- | --- | --- | --- | --- | --- |
| Function/  Acceptance/  Requirement/  Test Case | Total No. of Test Cases Executed | Test Case  Identifier | Defects/ Deviation/  Problem | Pass/Fail | Approval Time/ Date | Approved by |
| isValidWeight | 6 | TestValidWeight |  | Pass | 27 Oct 2024 | Eda |
|  |  | TestInvalidWeightLow |  | Pass | 27 Oct 2024 | Eda |
|  |  | TestInvalidWeightHigh |  | Pass | 27 Oct 2024 | Eda |
|  |  | TestEdgeWeightLow |  | Pass | 27 Oct 2024 | Eda |
|  |  | TestEdgeWeightHigh |  | Pass | 27 Oct 2024 | Eda |
|  |  | TestMaxWeight |  | Pass | 24 Dec  2024 | Eda |
| isValidSize | 3 | TestValidSize |  | Pass | 27 Oct 2024 | Eda |
|  |  | TestInvalidSizeHigh |  | Pass | 27 Oct 2024 | Eda |
|  |  | TestValidBoxSize |  | Pass | 24 Dec 2023 | Eda |
| isValidDestination | 9 | TestEdgeCaseDestination |  | Pass | 10 Nov 2024 | Eda |
|  |  | TestInvalidDestinationStartLetter |  | Pass | 10 Nov 2024 | Eda |
|  |  | TestInvalidDestinationNoLetterEnd |  | Pass | 10 Nov 2024 | Eda |
|  |  | TestInvalidDestinationMiddleNotDigits |  | Pass | 10 Nov 2024 | Eda |
|  |  | TestEdgeCaseDestination1 |  | Pass | 10 Nov 2024 | Eda |
|  |  | TestEdgeNotValidDestination |  | Pass | 10 Nov 2024 | Eda |
|  |  | TestEdgeNotValidRowDestination |  | Pass | 10 Nov 2024 | Eda |
|  |  | TestEdgelowerLetterDestination |  | Pass | 10 Nov 2024 | Eda |
|  |  | TestDestinationByRowAndCol |  | Pass | 24 Dec 2024 | Eda |
| calculateRemainingTruckCapacity | 1 | TestTruckCapacity | The testing phase identified 2 defects, with one resolved and the other under investigation. | Fail | 29 Dec 2024 | Eda |
| canTruckHandleShipment | 2 | TestCanTruckHandleShipment |  | Pass | 20 Nov  2024 | Eda |
|  |  | TestCanTruckHandleShipment1 |  | Pass | 20 Nov  2024 | Eda |
| generateDiversions | 4 | TestBasicFunctionality |  | Pass | 20 Nov  2024 | Eda |
|  |  | TestTopLeftCorner |  | Pass | 20 Nov  2024 |  |
|  |  | TestBottomRightCorner |  | Pass | 20 Nov  2024 | Eda |
|  |  | TestGenerateDiversions |  | Pass | 20 Nov  2024 | Eda |
| manageShipment | 4 | TestManageShipment | Passing NULL makes it impossible for the function to assign a shipment to any truck. | Fail | 21 Nov 2024 | Eda |
|  |  | TestManageShipment\_Success |  | Pass | 21 Nov 2024 | Eda |
|  |  | TestManageShipment\_Failure\_NoTruck |  | Pass |  | Eda |
|  |  | TestManageShipment\_Truck | The currentWeight or other truck fields are not updated inside manageShipment.  The logic in manageShipment does not correctly evaluate which truck can handle the shipment. | Fail |  | Eda |
| distance | 1 | TestDistance |  | Pass | 27 Oct 2024 | Eda |
| shortestPath | 7 | TestShortestPath |  | Pass | 15 Nov  2024 | Eda |
|  |  | TestShortestPath\_SamePoint |  | Pass | 20 Nov 2024 | Eda |
|  |  | TestShortestPath\_Boundary |  | Pass | 20 Nov 2024 | Eda |
|  |  | TestShortestPath\_NoPath |  | Pass | 20 Nov 2024 | Eda |
|  |  | TestShortestPath\_StraightLine |  | ! | 20 Nov 2024 | Eda |
|  |  | TestShortestPathAcc |  | Pass | 20 Nov 2024 | Eda |
|  |  | TestTruckCannotDriveThroughBuildings |  | Pass | 20 Nov 2024 | Eda |
| getPossibleMoves |  | TestGetPossibleMoves |  | Pass | 27 Oct  2024 | Eda |
| getClosestPoint | 3 | TestGetClosestPoint\_Start |  | Pass | 20 Nov 2024 | Eda |
|  |  | TestGetClosestPoint\_Duplicates |  | Pass | 20 Nov 2024 | Eda |
|  |  | TestGetClosestPoint\_LastPoint |  | Pass | 20 Nov 2024 | Eda |