# Test Description

**Test Name or ID**: BB\_getSpaceRemaining

**Test Type**: Black Box

**Description**: To ensure the function returns the correct limiting factor of a Truck, either the Truck’s remaining weight or remaining value.

**Setup:**

1. Copy the Truck struct (parameter).
2. Ensure that the Truck struct has values assigned to CurrentWeight and CurrentVolume.
3. Call getSpaceRemaining with the copied Truck struct argument.
4. Define a double value for the limiting factor we expect to be returned.
5. Create assertions to compare the return value with the expected value and validate the returned limiting factor.

**Test Function**: BB\_GetSpaceRemaining

**Test Scenarios:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | Test Data | Expected Result | Actual Result | Pass/Fail |
| Check function returns the correct result if CurrentWeight and CurrentVolume values are within range. | truck.CurrentWeight = 500  truck.CurrentVolume = 10 | 0.5 |  |  |
| Check function returns the correct result if CurrentWeight is near max value. | truck.CurrentWeight = 800  truck.CurrentVolume = 24 | 0.2 |  |  |
| Check function returns the correct result if CurrentWeight is at max. | truck.CurrentWeight = 1000  truck.CurrentVolume = 24 | 0 |  |  |
| Check function returns the correct result if CurrentVolume is at max. | truck.CurrentWeight = 800  truck.CurrentVolume = 36 | 0 |  |  |
| Check function returns the correct result if CurrentWeight and CurrentVolume are both odd. | truck.CurrentWeight = 801  truck.CurrentVolume = 25 | 0.199 |  |  |
| Check function returns the correct result if CurrentWeight is odd. | truck.CurrentWeight = 801  truck.CurrentVolume = 24 | 0.199 |  |  |
| Check function returns the correct result if CurrentVolume is odd. | truck.CurrentWeight = 800  truck.CurrentVolume = 25 | 2 |  |  |
| Check function returns the correct result if CurrentWeight and CurrentVolume values are at max. | truck.CurrentWeight = 1000  truck.CurrentVolume = 36 | 0 |  |  |

**Bugs Found**:

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