# Function Description

**Function Name:** getSpaceRemaining

**Parameter List:**

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| --- | --- | --- |
| Parameter Name | Type | Description |
| *const* *struct* Truck\* *truck* | struct pointer | This points to the struct of a Truck. The Truck struct contains CurrentWeight and CurrentVolume values that are used to calculate the Truck’s remaining weight, remaining volume, and its limiting factor (either its remaining weight or remaining volume). |
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**Returns:** The function returns a double value, representing the Truck’s limiting factor. The limiting factor is a percentage of either the Truck’s remaining weight or remaining value.

**Description:** The function calculates the remaining weight and volume of a Truck in percentages by subtracting the CurrentWeight and CurrentVolume values with the maximum weight (1000kg) and volume (36 m^3) a Truck can hold. Then, it divides the sums with the maximum values to get the percent values.

To determine the limiting factor, it compares the percentages. If the remaining weight percentage is greater than the remaining volume percentage, the limiting factor is the remaining weight, and vice versa.

The function is used when sorting the trucks based on their limiting factors. For example, if two trucks are the same distance away from the destination, the limiting factor is considered when determining which truck should hold the package.