# Functions Description (JUST A WIP, SUBJECT TO CHANGE)

**Function Name:** findTruckForShipment

**Parameter List:**

* **Map: main map**
* **Trucks[]: array of trucks**
* **numTrucks: size of trucks array**
* **Shipment: the shipment**

|  |  |  |
| --- | --- | --- |
| Parameter Name | Type | Description |
| Map | Map struct | Main map |
| Trucks[] | Array of Truck struct | Array of trucks |
| numTrucks | int | Size of trucks array |
| Shipment | Shipment struct | The shipment |

**Returns:** Index of the best suitable truck, or -1 if none found.

**Description:** Returns the index of the best truck to load the shipment, by evaluating and comparing each’s truck capacity remaining by weight and volume. If none found returns -1.

**Function Name:** percentageWeightFull

**Parameter List:**

* **None**

|  |  |  |
| --- | --- | --- |
| Parameter Name | Type | Description |
| None |  |  |

**Returns:** Percentage full by weight.

**Description:** Percentage full by weight of the truck.

**Function Name:** percentageVolumeFull

**Parameter List:**

* **None**

|  |  |  |
| --- | --- | --- |
| Parameter Name | Type | Description |
| None |  |  |

**Returns:** Percentage full by volume.

**Description:** Percentage full by volume of the truck.

**Function Name:** validateDestination

**Parameter List:**

* **Destination: destination building**

|  |  |  |
| --- | --- | --- |
| Parameter Name | Type | Description |
| Destination | Point struct | Destination coordinate |

**Returns:** True or false of the destination’s validity.

**Description:** Checks if destination is a building.