**Input:** CreateTruck (CreateTruck, params:0)

**Output**:

Truck ID: 1001 --- Brand: Scania --- Status: Free,

Capacity: 42000

Range: 8000

=====================================================

Truck ID: 1002 --- Brand: Scania --- Status: Free,

Capacity: 42000

Range: 8000

=====================================================

Truck ID: 1003 --- Brand: Scania --- Status: Free,

Capacity: 42000

Range: 8000

=====================================================

Truck ID: 1004 --- Brand: Scania --- Status: Free,

Capacity: 42000

Range: 8000

=====================================================

Truck ID: 1005 --- Brand: Scania --- Status: Free,

Capacity: 42000

Range: 8000

=====================================================

Truck ID: 1006 --- Brand: Scania --- Status: Free,

Capacity: 42000

Range: 8000

=====================================================

Truck ID: 1007 --- Brand: Scania --- Status: Free,

Capacity: 42000

Range: 8000

=====================================================

Truck ID: 1008 --- Brand: Scania --- Status: Free,

Capacity: 42000

Range: 8000

=====================================================

Truck ID: 1009 --- Brand: Scania --- Status: Free,

Capacity: 42000

Range: 8000

=====================================================

Truck ID: 1010 --- Brand: Scania --- Status: Free,

Capacity: 42000

Range: 8000

=====================================================

Truck ID: 1011 --- Brand: Man --- Status: Free,

Capacity: 37000

Range: 10000

=====================================================

Truck ID: 1012 --- Brand: Man --- Status: Free,

Capacity: 37000

Range: 10000

=====================================================

Truck ID: 1013 --- Brand: Man --- Status: Free,

Capacity: 37000

Range: 10000

=====================================================

Truck ID: 1014 --- Brand: Man --- Status: Free,

Capacity: 37000

Range: 10000

=====================================================

Truck ID: 1015 --- Brand: Man --- Status: Free,

Capacity: 37000

Range: 10000

=====================================================

Truck ID: 1016 --- Brand: Man --- Status: Free,

Capacity: 37000

Range: 10000

=====================================================

Truck ID: 1017 --- Brand: Man --- Status: Free,

Capacity: 37000

Range: 10000

=====================================================

Truck ID: 1018 --- Brand: Man --- Status: Free,

Capacity: 37000

Range: 10000

=====================================================

Truck ID: 1019 --- Brand: Man --- Status: Free,

Capacity: 37000

Range: 10000

=====================================================

Truck ID: 1020 --- Brand: Man --- Status: Free,

Capacity: 37000

Range: 10000

=====================================================

Truck ID: 1021 --- Brand: Man --- Status: Free,

Capacity: 37000

Range: 10000

=====================================================

Truck ID: 1022 --- Brand: Man --- Status: Free,

Capacity: 37000

Range: 10000

=====================================================

Truck ID: 1023 --- Brand: Man --- Status: Free,

Capacity: 37000

Range: 10000

=====================================================

Truck ID: 1024 --- Brand: Man --- Status: Free,

Capacity: 37000

Range: 10000

=====================================================

Truck ID: 1025 --- Brand: Man --- Status: Free,

Capacity: 37000

Range: 10000

=====================================================

Truck ID: 1026 --- Brand: Actros --- Status: Free,

Capacity: 26000

Range: 13000

=====================================================

Truck ID: 1027 --- Brand: Actros --- Status: Free,

Capacity: 26000

Range: 13000

=====================================================

Truck ID: 1028 --- Brand: Actros --- Status: Free,

Capacity: 26000

Range: 13000

=====================================================

Truck ID: 1029 --- Brand: Actros --- Status: Free,

Capacity: 26000

Range: 13000

=====================================================

Truck ID: 1030 --- Brand: Actros --- Status: Free,

Capacity: 26000

Range: 13000

=====================================================

Truck ID: 1031 --- Brand: Actros --- Status: Free,

Capacity: 26000

Range: 13000

=====================================================

Truck ID: 1032 --- Brand: Actros --- Status: Free,

Capacity: 26000

Range: 13000

=====================================================

Truck ID: 1033 --- Brand: Actros --- Status: Free,

Capacity: 26000

Range: 13000

=====================================================

Truck ID: 1034 --- Brand: Actros --- Status: Free,

Capacity: 26000

Range: 13000

=====================================================

Truck ID: 1035 --- Brand: Actros --- Status: Free,

Capacity: 26000

Range: 13000

=====================================================

Truck ID: 1036 --- Brand: Actros --- Status: Free,

Capacity: 26000

Range: 13000

=====================================================

Truck ID: 1037 --- Brand: Actros --- Status: Free,

Capacity: 26000

Range: 13000

=====================================================

Truck ID: 1038 --- Brand: Actros --- Status: Free,

Capacity: 26000

Range: 13000

=====================================================

Truck ID: 1039 --- Brand: Actros --- Status: Free,

Capacity: 26000

Range: 13000

=====================================================

Truck ID: 1040 --- Brand: Actros --- Status: Free,

Capacity: 26000

Range: 13000

=====================================================

**Input:** CreateRoute AliceSprings Adelaide Melbourne Sydney Bristbane (CreateRoute, params: n)

**Output**: Route with ID: 1 has been created!

**Input:** ViewRoute RouteId (ViewRoute, params: 1)

**Output**:

RouteID: 1

Route status: **open - >** **default message – changes when packages assigned to route, and depends on the current date**

Route locations: Alice Spring (10/02 Saturday @ 06:00) → Adelaide (10/02 Saturday @ 20:00) → Sydney (11/02 Sunday @ 18:00) -> Melbourne (12/02 Monday @ 14:00) -> Brisbane (13/02 Tuesday @ 14:00)

Route distance: 4041 km

Route capacity: **Capacity is still uncalculated. - >** **default message – changes when packages assigned to route from hub**

Route start date: 10/02 Saturday @ 06:00

Route final ETA: 13/02 Tuesday @ 14:00

PackageID: **Package is still unassigned. - >** **default message – changes when packages assigned to route from hub**

TruckID: **Truck is still unassigned. - >** **default message – changes validation passes route capacity < truck capacity; route distance < truck max range, truck availability between route start date and route final ETA**

**Input:** SearchTruck available, truck range < route range (SearchTruck, params: ?)

**Output**:

**Input:** AddTruckToRoute RouteId TruckId (AddTruckToRoute, params: 2)

**Output:** Truck with ID: 1001 has been added to route with ID: 1!

**Input:** ViewRoute RouteId (ViewRoute, params: 1)

**Output**:

RouteID: 1

Route status: **open**

Route locations: Alice Spring (10/02 Saturday @ 06:00) → Adelaide (10/02 Saturday @ 20:00) → Sydney (11/02 Sunday @ 18:00) -> Melbourne (12/02 Monday @ 14:00) -> Brisbane (13/02 Tuesday @ 14:00)

Route distance: 4041 km

Route capacity: **Capacity is still uncalculated.**

Route start date: 10/02 Saturday @ 06:00

Route final ETA: 13/02 Tuesday @ 14:00

PackageID: **Package is still unassigned.**

TruckID: **1001**

**Input:** UpdateTruck TruckID unavailable (UpdateTruck, params: 2)

**Output**: Truck with ID: 1007 has been updated with status: unavailable!

**Input:** ViewTruck TruckId (ViewTruck, params: 1)

**Output**:

TruckID: 1001

Truck max capacity: 42 000 kg

Truck max range: 8 000 km

Truck status: unavailable

**Input:** RegisterUser steven1 [steven\_jones1@gmail.com](mailto:steven_jones1@gmail.com) steven jones ***(***RegisterUser ***, params: 4)***

**Output:** Customer with username: steven1 has been registered!

**Input:** CreatePackage AliceSprings Adelaide weight ***(***CreatePackage , ***params: 3)***

**Output:** Package with ID: 1 has been created!

**Input:** ViewPackage IdPackage ***(***ViewPackage,  ***params: 1)***

**Output:**

PackageID: 1

Package weight: 45 kg

Package start location: Alice Springs

Package end location: Adelaide

Package entry date: 09/02 Friday @ 11:30

Package final ETA: **Package is still unassigned.** **- >** **default message – changes when packages is assigned to route, gets the date from the route location ETA**

Package status: **unassigned (unassigned => assigned => in progress) - >** **default message – changes when packages is assigned to route, and depends on the current date**

RouteID: **Package is still unassigned.** **- >** **default message – changes when packages is assigned to route, gets the route’s ID**

**Input:** SearchRoute AliceSprings Adelaide (SearchRoute, params: 2)

**Output**:

Route locations: Alice Spring (10/02 Saturday @ 06:00) → Adelaide (10/02 Saturday @ 20:00) → Sydney (11/02 Sunday @ 18:00) -> Melbourne (12/02 Monday @ 14:00) -> Brisbane (13/02 Tuesday @ 14:00)

**Input:** AddPackageToRoute RouteId PackageId (AddPackageToRoute, params: 2)

**Output:** Package with ID: 1 has been added to route with ID: 1!

**Input:** UpdatePackage PackageID RouteId Assigned Eta (UpdatePackage, params: 4)

**Output**: Package with ID: 1 has been updated with status: assigned!

**Input:** ViewPackage IdPackage ***(***ViewPackage ***, params:1)***

**Output:**

PackageID: 1

Package weight: 45 kg

Package start location: Alice Springs

Package end location: Adelaide

Package entry date: 09/02 Friday @ 11:30

Package final ETA: **13/02 Tuesday @ 14:00**

Package status: **assigned**

RouteID: **1**

**Input:** ViewRoute RouteId (ViewRoute, params: 1)

**Output**:

RouteID: 1

Route status: **open**

Route locations: Alice Spring (10/02 Saturday @ 06:00) → Adelaide (10/02 Saturday @ 20:00) → Sydney (11/02 Sunday @ 18:00) -> Melbourne (12/02 Monday @ 14:00) -> Brisbane (13/02 Tuesday @ 14:00)

Route distance: 4041 km

Route capacity: **45**

Route start date: 10/02 Saturday @ 06:00

Route final ETA: 13/02 Tuesday @ 14:00

PackageID: **1**

TruckID: **1001**

**Input:** UpdateRoute RouteId scheduled (UpdateRoute, params:2)

**Output**: Route with ID: 25 has been updated with status: scheduled!

**Input:** ViewRoute RouteId (ViewRoute, params: 1)

**Output**:

RouteID: 1

Route status: **scheduled**

Route locations: Alice Spring (10/02 Saturday @ 06:00) → Adelaide (10/02 Saturday @ 20:00) → Sydney (11/02 Sunday @ 18:00) -> Melbourne (12/02 Monday @ 14:00) -> Brisbane (13/02 Tuesday @ 14:00)

Route distance: 4041 km

Route capacity: **45**

Route start date: 10/02 Saturday @ 06:00

Route final ETA: 13/02 Tuesday @ 14:00

PackageID: **1**

TruckID: **1001**

**Input:** UpdateUser PackageId StatusPackage EtaPackage (UpdateUser, params:2)

**Output**: Package with ID: 1 has status: scheduled and ETA: **13/02 Tuesday @ 14:00**!

**Input:** ViewRoutesOnRoute (ViewRoutesOnRoute, params: 0?)

**Output:**

RouteID: 1

Route status: on route

Route locations: Perth (15/02 Thursday @ 06:00) → Melbourne 16/02 Friday @ 22:00

Route distance: 3509 km

Route capacity: 13 555 kg

Route start date: 15/02 Thursday @ 06:00

Route final ETA: 16/02 Friday @ 22:00

Route current ETA: 16/02 Friday @ 22:00

===============

RouteID: 2

Route status: on route

Route locations: Alice Springs (16/02 Friday @ 06:00) → Melbourne 17/02 Saturday @ 07:00

Route distance: 2255 km

Route capacity: 10 139 kg

Route start date: 16/02 Friday @ 06:00

Route final ETA: 17/02 Saturday @ 07:00

Route current ETA: 17/02 Saturday @ 07:00

===============

RouteID: 3

Route status: scheduled

Route locations: Bristbane (17/02 Saturday @ 06:00) → Adelaide 18/02 Sunday @ 04:00

Route distance: 1927 km

Route capacity: 28 744 kg

Route start date: 17/02 Saturday @ 06:00

Route final ETA: 18/02 Sunday @ 04:00

Route current ETA: 18/02 Sunday @ 04:00

===============

**Input:** RemovePackageFromRoute RouteId PackageId (RemovePackageFromRoute, params: 2)

**Output:** Package with ID: 1 has been removed from route with ID: 1!

**Input:** RemoveTruckFromRoute RouteId TruckId (RemoveTruckFromRoute, params: 2)

**Output:** Truck with ID: 1001 has been removed from route with ID: 1!

**Input:** UpdateRoute RouteId cancelled (UpdateRoute, params:2)

**Output**: Route with ID: 25 has been updated with status: cancelled!

**Input:** ViewRoute RouteId (ViewRoute, params: 1)

**Output**:

RouteID: 1

Route status: **cancelled**

Route locations: Alice Spring (10/02 Saturday @ 06:00) → Adelaide (10/02 Saturday @ 20:00) → Sydney (11/02 Sunday @ 18:00) -> Melbourne (12/02 Monday @ 14:00) -> Brisbane (13/02 Tuesday @ 14:00)

Route distance: 4041 km

Route capacity: **Capacity is still uncalculated.**

Route start date: 10/02 Saturday @ 06:00

Route final ETA: 13/02 Tuesday @ 14:00

PackageID: **Package is still unassigned.**

TruckID: **Truck is still unassigned.**

**Input:** UpdateTruck TruckID available (UpdateTruck, params: 2)

**Output**: Truck with ID: 1007 has been updated with status: available!

**Input:** ViewTruck TruckId (ViewTruck, params: 1)

**Output**:

TruckID: 1001

Truck max capacity: 42 000 kg

Truck max range: 8 000 km

Truck status: available

**Input:** UpdatePackage PackageID RouteId Assigned Eta (UpdatePackage, params: 4)

**Output**: Package with ID: 1 has been updated with status: unassigned!

**Input:** ViewPackage IdPackage ***(***ViewPackage,  ***params: 1)***

**Output:**

PackageID: 1

Package weight: 45 kg

Package start location: Alice Springs

Package end location: Adelaide

Package entry date: 09/02 Friday @ 11:30

Package final ETA: **Package is still unassigned.**

Package status: **unassigned**

RouteID: **Package is still unassigned.**