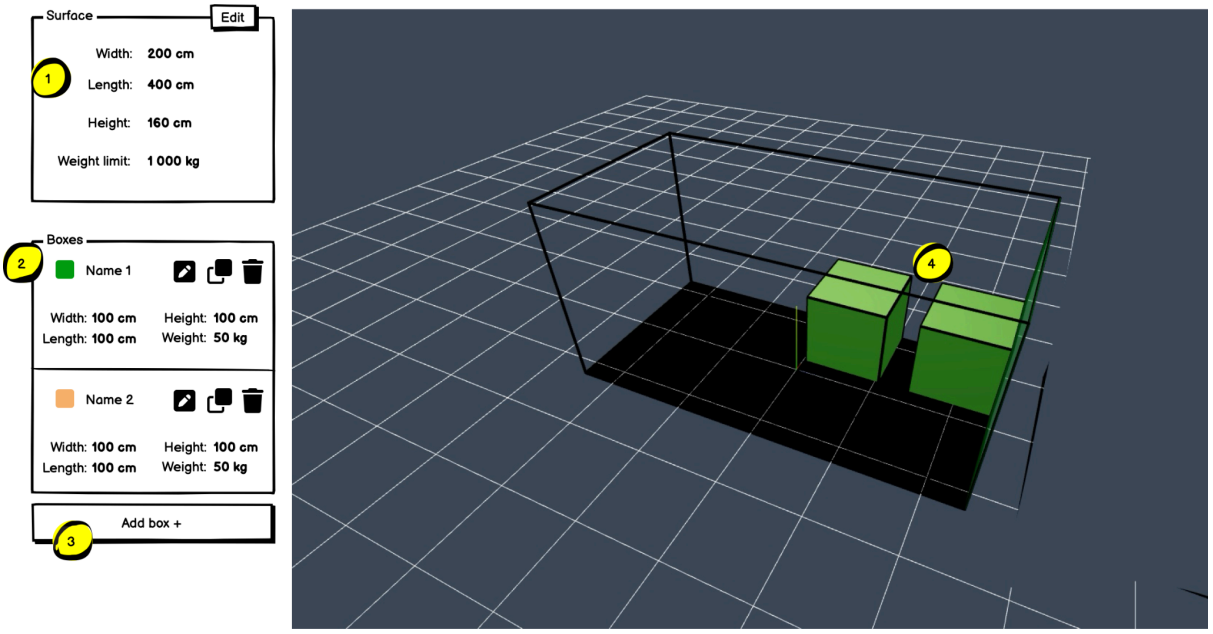
Main assumptions

1. The application should work in a web browser.
2. Technologies used: Vanilla Javascript + Three.js + optionally React, as a component.
3. The application will be used to calculate the space needed to store specific shipments (parcels).
4. Parcels can be placed in the declared space (width x length x height), optionally they can go outside the space in order to move it with the marking on the screen.
5. Parcels should be placed sequentially when added.
6. Optionally, parcels can be placed one on top of the other to the declared height - by default they will not be placed on top of each other.
7. You can create any number of parcels.
8. The application should monitor and display alerts:
    a. Proper placement of parcels in space
    b. Placing parcels one on top of the other only when possible (declared in the parcel on which another parcel will be placed)
    c. Exceeding the permissible weight in the defined warehouse "Weight limit"



1. Defining “surface”

We can define one space, default values, e.g. as given on screen. In editing, option to enter own values. Additionally, in editing, drop-down list with predefined values (possibility of editing in configuration file).

2. Lista “boxes”

Contains a list of added packages along with their dimensions, weight, name and color. Possible actions for a package from this panel are:

1) EDIT - change parameters
2) COPY - create another package with the same parameters
3) DELETE - delete the package

3. Adding a new package

Pop-up window allowing you to enter package parameters:

- name
- color
- width
- length
- height
- weight
- note
- “Can another package be placed on it?” Yes/No

Once saved, the package is added to the space in the next free space (next to the last package).

4. Surface preview

Simplified example: https://threejs.org/examples/#webgl_interactive_voxelpainter

The view is the entire available area, defined surfaces and packages.

The preview should allow:

1) Rotating the 3D screen, in all planes, zooming out and in
2) Moving packages using the "drag and drop" method
3) Rotating packages horizontally
4) Displaying the context menu after right-clicking on the package:
    a) Rotate 90 degrees
    b) Edit
    c) Copy
    d) Delete
5) After left-clicking, stick the package to the cursor with the possibility of moving it