

## Assignment 2: A three-dimensional clock

The idea is to write a 3-dimensional clock that can be rotated with the mouse and shows different times.



### 1 Requirements:

1. The main body of the clock should have the shape of a cylinder. Add mouse control so that the clock can be rotated.
2. Add small ticks for every minute and bigger ticks every five minutes.
3. Mark the twelve o'clock position.
4. Add hour-, minute- and seconds-hands showing the current time.
5. Add a blob in the middle where the hands are mounted.
6. Implement the hour- and minute-hands as squeezed (i.e. scaled) spheres (use `Object3D.scale.x`, etc. for this).
7. Create clocks on both sides of the cylinder. One side should show Hamburg time, the other one the time of your favourite place outside our time zone.
8. Add a cylindrical outer ring of thickness  $> 0$  to protect the clock.

### 2 Coding style

- Stick to the coding style guide which can be found in the Readme file for chapter 3 in the gitlab repository.
- It is your choice whether you load the `three.js` library as a module or just as a JavaScript text file.

### 3 Handing in the solution

**No group work allowed.** Every course participant has to write her or his *own* code! Implement your entire solution within the two files `Clock3D.html` and `Clock3D.js`. Feel free to change these files as you like but do not add any further files. The deadline for submission is the **9th of December, 2021**.