

Excercise Context / Sensors (TBD until 14.05.2017)

(You may work in groups or help each other as long as you understand the code and are able to modify/explain each relevant code line (same goes for pasted code from the web)).

Excercise 1 Context

- a. Sketch a contextsensitive Application
- b. Categorize it according to Schilit (explain why)
- c. Categorize all relevant context regarding category of context, passive/active and primary/secondary
- d. Modify a. to be in another class according to Schilit (Tip: You may modify the previous answer if this does not work)

Excercise 2 Sensors

- a. Create a webpage that contains a form with a text field called (call it Context) and a toggle switch

(Tip: https://www.w3schools.com/howto/howto_css_switch.asp)

- b. Add a EventListener to the DeviceMotionEvent that gets enabled on Toggle

(Tip: <https://www.html5rocks.com/en/tutorials/device/orientation/>)

- c. Install a time series data base using docker (www.docker.com):

```
docker run -p 8086:8086  
-v influxdb:/var/lib/influxdb influxdb
```

Create a new database called training

- d. Use influent (<https://github.com/gobwas/influent>) to write the sensor data to the database within the event listener

(Tip: Use Batch and write asynchronously every second or so. You may already aggregate the results to 20 samples per seconds)

- e. Collect data for some context that may be inferred from accelerometer data
- f. Optional: Extend with more sensors (<http://caniuse.com/ambient-light>,
https://developer.mozilla.org/en-US/docs/Web/API/Web_Audio_API/Visualizations_with_Web_Audio_API,
https://developer.mozilla.org/en-US/docs/Web/API/Touch_events,)

Solution/Notes

- Windows 10 Pro/Mac users can use Docker for Windows/Mac and Kitematic to easily start containers
- Other Windows users can use Docker Toolbox

[Example Solution for Excercise 2](#)