Sprint 2 - Retrospective

List of issues

Closed issues:

⊙ 1 Open ✓ 23 Closed	
⊘ **Add functionality for SQLHandler to read/write to spike database** `enhancement` #53 by Kim3n was closed 6 minutes ago	
⊘ **Create delete(Long):void** #52 by markou00 was closed 11 minutes ago	
⊘ **Create select(Long ms):JSONObject** #51 by markou00 was closed 11 minutes ago	
⊘ **Create isSpike method** #42 by markou00 was closed yesterday	
⊘ **Improve getThunderSummary by using changes in pressure as parameter** `enhancement` #32 by z-rayc was closed 2 days ago	
⊘ **create getDayRapport method** #45 by markou00 was closed 2 days ago	
⊘ **Replace dummy data in weather_report.js with data from DB** #36 by markou00 was closed 2 days ago	
⊘ **Fix bug in sensornode where Wind direction may be spiked** `bug` #41 by Oransj was closed 3 days ago	
⊘ **create getHomePage method** #44 by markou00 was closed 4 days ago	
⊘ **Create Sorting class** #39 by markou00 was closed 6 days ago	

⊘ **Create a method to convert ms to date to be used in queries** `enhancement` #23 by Kim3n was closed 6 days ago	
⊘ **Restructure the JSON file format** #33 by markou00 was closed 6 days ago	
⊘ **Delete the information stored in the DB and insert new data for different days (TESTING)** #35 by markou00 was closed 6 days ago	
⊘ **Fix time bug in getDataFromAPI function** #34 by markou00 was closed 6 days ago	
⊘ **Make class that suimulates wind speed and wind direction** `enhancement` #31 by Oransj was closed 15 days ago	💬 1
⊘ **Make class that simulates the light (lux) throughout the day** `enhancement` #30 by Oransj was closed 15 days ago	💬 1
⊘ **Create class to simulate pressure change throughout the day** `enhancement` #29 by Oransj was closed 15 days ago	💬 1
⊘ **Create function to get weather type summary for a day** `enhancement` #28 by z-rayc was closed 15 days ago	
⊘ **Create functions to get average precipitation and wind during a day** `enhancement` #27 by z-rayc was closed 15 days ago	
⊘ **Create functions to get min. and max. temperature for a day** `enhancement` #26 by z-rayc was closed 15 days ago	
⊘ **Create function to convert from weather summary (number values) to text value** `enhancement` #25 by z-rayc was closed 15 days ago	
⊘ **Take in data and return a weather summary for a given time interval** `enhancement` #24 by z-rayc was closed 15 days ago	

⊘ **Add subscriber class in Visual node** `enhancement` #22 by Oransj was closed 17 days ago	💬 1

Unfinished issues:
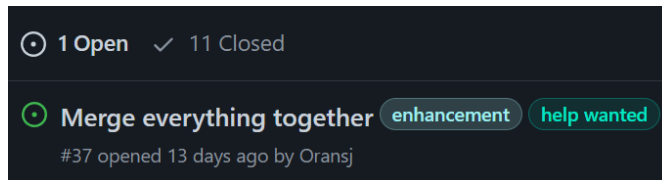
Above you can see what issues were made, which ones were finished in time for the sprint deadline, and who completed/worked on the issues. We also finished the open issues from sprint 1.

Distribution of issues
At the start of the sprint we got an overview of what needed to be done, and created a few issues to start. During the sprint everyone made their own issues of what needed to be done.

Retrospective
The second sprint lasted between October 24th and November 13th. Our goals for the sprint were:
- Application is functional and uses correct data
- Works as intended (no bugs)
- The application fulfills the fundamental checks for the project

The first goal was successful. The simulated data works as expected, and the backend handles it like expected. The visual node shows the correct data.

Multiple bugs were fixed a few days after sprint 2 ended, but the second goal was still mostly successful as most bugs had been fixed by the end of sprint 2.

Our last goal of fulfilling the fundamental requirements can be broken down into multiple points. A relevant and meaningful application: in our opinion the application is helpful, although not an original idea. At least two nodes programmed by the students: we have a website as a visual node and use a Raspberry Pi as a sensor node.

Some challenges were getting accurate and realistic data, since we simulate the data ourselves. We had to do research into weather data to get realistic results.

Our room for improvement:
- We can improve weather forecasting techniques. Instead of using Time Series with ARIMA model we can use Window Sliding Technique and Minimum Euclidean Distance for more accuracy.
- We can improve performance when loading the day rapport. Now we are querying data from DB for each hour of the day. We could query a list of hours instead of querying each hour individually.