# Group03 Program Management Report (PMR)

## Used Project Management Practices

As a process framework we used SCRUM. This agile framework allows for changes and adjustments, since it approaches development iteratively. This is particularly useful when you are working with new technologies, in this case MQTT, due to inexperience, problems will arise and changes will be needed. Our sprints were 7 days long, from Wednesday to Wednesday. The retrospective happened with our TA, who was also our PO in this project. For the organisation of the project and the progress tracking, we used Trello, an application that allows for the online use of a Kanban board. The main communication channel was WhatsApp, the group worked a lot while being in the same location though, since we realised that this improves communication and learning.

## Project management decisions

Looking at the management decisions, you can identify several which had the strongest impact on our schedule. At the start of the project we allocated a large amount of time for documentation, to lead the way through the development. By doing so, we wanted to assure that every team members knows the current step and the next step in the plan at any given time. We also devoted the time at the start of each sprint to update the documentation, according to the new plans, to assure the existence of guidelines for the following programming. Schedule-wise, we aimed for an early end of development, a goal that we decided to aim for in the beginning, since we saw the christmas vacation as a time, where progress can't be guaranteed.

We have decided on a specific set of roles for this project. Even though every team member contributed in every part of the system, we split the team up in 3 subgroups, to strengthen the feeling of ownership and responsibility for components of the system. Haider Ali and Fredrik Ullman were working with the Java application. Mikael Köse Jansson and Gagandeep Singh were responsible for the Web Application. Eyuell Hailemichael Gebremedhin and Moritz Denke were focussing on the Android application. We also introduced a system, which should assure the completion of code and documentation. This system is based on the approach that one of the two people responsible for an area is more focused on the documentation and the other one is more focussed on the development of code, however, they are supposed to share the knowledge of the system.
Moritz Denke was the assigned Scrum Master, Fredrik Ullman was Vice Scrum Master. The election of a vice scrum master originated based on the experience from former projects. It is basically a fault-tolerance mechanism.
All roles can be seen on the trello board.

Our scope was set by the assignment, looking at the functionality of the application. However, we decided to develop two visualizers, a web application and an android application, to allow for maximum versatility, compatibility and accessibility at any time.

This decision introduced certain risks, in terms of increased chance of failure, since the team had to work in smaller units, but it also allowed for more involvement for each team-member.

Looking at risks in general, we realised fast that good communication is key, since misunderstandings can easily occur and will cost a lot of time, while avoiding progress.