**Preface**

In today’s world, houses get more insulated, which results in condensation damages and high risk of allergies triggering, to name a few. First Airbenders aims to provide a solution which automates the indoor environment and thus eliminates the need of constant human regulation.

**Description**

There are several sensors that continuously take measurements. These sensors will send their values to a simulated ventilation box in a C# application, where an algorithm will calculate the current state of the air quality and the required actions to improve it. Furthermore, a green and red LED show if a sensor is being used by the algorithm. Additionally, the red LED indicates whether the bi-directional communication between a sensor and the application is lost. All values will be stored in a log which can be reviewed by the user.

**Requirements**

The autonomous communication between sensor and application needs to be swift in order to ensure optimal performance. Furthermore, the systems will be functional on every operating system and will not conflict any processes within the environment. Although we expect a fully functioning system, we still want to deliver customer service, which ensures help from the maintainer to the client in order to solve critical issues. Only the client and maintainer have access to the system files to guarantee a secure system.

**Way of working**

The project group believes that project planning is key to achieve the highest customer satisfaction. This is done by setting internal and external deadlines. Internal deadlines are set by the project group and external deadlines are set by the customer. Internal deadlines ensure that the project group deliver the promised product on time. They are set during group meetings which are held weekly. The current release is discussed and criticized during these group meetings. The current release consists of the already made progression plus deliverables which are reviewed by group members. Outside of group meetings the members will communicate with each other via WhatsApp or during breaks. Once every three weeks the project group will show the progression on the product with the customer. At last, the teacher is contacted weekly to deliver feedback and thus to improve the end result.

**Configuration management**

All of the written code is submitted to the Git repository. From there, a group members should review the code and give feedback. The program should then be tested and possibly a new iteration of the program will emerge, which also has to be reviewed and tested. If a member wants their code to be reviewed and tested, they can assign a task in “Boards” in GitLab or simply write a message in the WhatsApp group. When an application is assigned to more than 1 person, the members are responsible for creating their own branch to work on in Git instead of using the master branch.