**Use case:** System installation

**Actor:** Maintainer

**Trigger:** System is ordered by customer

**Pre-condition:** System has been paid for by the customer

**Main success scenario:**

1. Maintainer visits customer’s address.
2. Sensors are installed and configured in the locations specified by the customer.
3. System functionality is tested.
4. Maintainer leaves the premise.

**Extensions:**

1a. 1. If address is not specified in order, call the customer for instructions.

2. End of use case.

1b. 1. If user prefers to be present during the installation, contact them for appropriate times.

2. End of use case.

2a. 1.If the customer has no specific locations in mind it is up to the maintainer to choose appropriate locations.

2. Continue to 3. from MSS

**Use case:** System expansion

**Actor:** Maintainer

**Trigger:** User requests expansion

**Pre-condition:** User already has a compatible system installed at home and has paid for an expansion

**Main success scenario:**

1. Maintainer visits customer’s address.
2. Additional sensors/ventilation box are/is installed and configured on the premise.
3. System functionality is tested.
4. Maintainer leaves the premise.

**Extensions:**

1a. 1. If address is not specified in order, call the customer for instructions.

2. End of use case.

1b. 1. If user prefers to be present during the installation, contact them for appropriate times.

2. End of use case.

2a. 1.If the customer has no specific locations in mind it is up to the maintainer to choose appropriate locations.

2. Continue to 3. from MSS

**Usecase*:*** Product refund

**Actor***:* Customer

**MainSuccessScenario:**

1. Customer recognizes problem
2. Customer contacts customer support to report problem
3. Company reviews problem
4. Customer ships defect product for further examination
5. Company detects an error
6. Company offers replacement product
7. Customer accepts offer
8. Customer receives replacement product
9. Received product functions as expected

**Extensions:**

3a. Product problem needs further examination by company

1: Return to step 4

3b. Product problem is clear to company without thorough examination (well-known manufacturing problem in multiple devices)

1: Return to step 5

5a. Company detects problem caused by user

1: Customer is informed

2: End of use case

5b. Company detects problem caused by company (manufacturing or shipping problem)

1: Return to MSS step 5

6a. Customer refuses replacement product and wants a refund instead

1: Refund is declined

2: Return to MSS step 5 or end of use case

9a. Received product doesn’t function as expected

1: Refund the cost of the product

2: Company reviews the broken received product

3: End of use case

***Use case*:** Alarm notification

***Actor:*** Customer

***Pre-condition****:* sensor readings too high

***Main Success Scenario:***

1. System detects extremely high value
2. System notifies user
3. System tries to handle the situation by itself
4. Problem solved and value is back to normal
5. Alarm stops

***Extensions:***

3a. System can’t handle situation

1: notify emergency services

2: End of use case

**Use case:** Changing the speed of the fan

**Actor:** User

**Trigger:** Increase or decrease the temperature

**Pre-condition:** User is dissatisfied with conditions

**Main success scenario:**

1. The user goes to fan settings in the application.
2. Enter the value of the temperature that he wants to set.
3. If the entered value is going to result in uncomfortable conditions according to the standards, the system will display a warning message on the screen.
4. User ignores the message and his/her preferred settings override the defaults.

**Extensions:**

4a 1. If user wants to use the advised value, he can click the message in 4.

2. End of use case.

**Use case:** System maintenance

**Actor:** Maintainer, user

**Trigger:** Issue in software or hardware

**Pre-condition:** The company is responsible for fixing issues either within the warranty period for free, or after this period if the issue is not related to the hardware.

**Main success scenario:**

1. The user follows the troubleshooting tips to figure out the issue.
2. User attempts everything described in the tips.
3. User contacts maintainer to report issue.
4. Maintainer handles the issue and tests the system.
5. Maintainer asks the user for feedback on the process.

**Extensions:**

2a 1. User fixes the issue by themselves.

2. End of use case.

3a 1. If the issue related to the software sector, the support team will attempt to solve the issue remotely.

2. continue to 4.