Elements we need

- Stakeholders introduction
    - Seller
    - Consumer
        - House seller
        - Resident
- Customer story - introduction to problem
    - Seller
    - Consumer
        - House seller
        - Resident
- Solution to problem (how our product would solve their problems)
    - Seller
    - Consumer
        - House seller
        - Resident
- GDPR principles
- Core elements
    - Data collection from at least three sensor nodes
        - 1RP for front door
            - Camera
            - Ringbell
        - 1 RP for
            - Smoke detector
            - Co2 detector
            - Speaker
        - 1RP //too many words, removed
            - Damp sensor
        - 1 RP
            - Door and window
        - 1RP for each light switch
            - Motion sensor
            - Servo
        - 1RP for
            - Heater button presser
            - Temperature sensor
    - At least one sink or gateway node that processes data, issues instructors, and/or forwards data.
        - 1 main gateway controller to connect all raspberry pis
    - Use of appropriate IoT protocols and technologies for data transport between sensor nodes, gateway(s), and any cloud service(s).
        - No idea what this means
    - Use of appropriate standards for describing data including observations, devices, and deployments.
        - ???
    - Use of the collected data, with appropriate actions taken depending on the value(s) of the data being observed. This can include appropriate

visualisations of the data, providing advice to the user, and/or the system triggering actuators.
        - Heating activated depending on temperature
        - Security sensors activated if values are too high (smoke, co2, damp)
        - Motion sensor has a low value -> light is turned off
        - Idk if boolean triggers count
    - The user should have some control over the system setup and how it operates – for exampling naming and defining the location of devices, or controlling how frequently data are collected.
        - Set up on discord, where the user will be asked through a series of question
            - His name
            - Name of each room that has our products
            - The products in that room and how they are divided into nodes (maybe)
            - Name of each light
    - Support for multiple users. In reality very few, if any IoT deployments will be developed and managed by the user – a more authentic scenario is a third-party organisation provides the IoT system to multiple different users. As such, the provider will typically have some way of knowing at least which system/devices is owned by which users
        - The information is collected from Discord and emailed (maybe) to us
    - An emulation script / mechanism. In a Digital Twin, it is necessary to have some way of generating synthetic data (automatically, by user input, etc.) for the system to work to demonstrate and test the system works correctly.
        - We need pseudocode
        - We will use scripts to test our sensors
            - Testing code

=Porco
=Allegra
=Kaveh
=Bradley

STRUCTURE

Introduction (250 words)

- Cool intro, like “In an era of automation, innovation is moving closer and closer to a fully connected future. bla bla bla. we are automating everything to make life easier and that is what *insert product name*’s aim is.
- Briefly explain what our product is
    - Don’t talk about individual sensors

Stakeholders

- There are 3 stakeholders
    - Seller
    - Consumer

        - House seller
        - Resident
- Problems for each stakeholder and their solution - story
    - Seller/Producer (200 words)
        - Problem
            - It is hard to enter already existing markets that are dominated by big established names
            - Sellers struggle to find a field that hasn't been dominated yet
        - Solution
            - Smart homes is a rising industry that still has no big company dominating it yet, but there are prospects of becoming one, so it's important to enter the industry early before it becomes a monopoly
                - https://www.theguardian.com/media/2020/jun/16/smart-speakers-risk-creating-big-tech-monopoly-in-homes
            - Hasn't become an essential in our everyday life yet
            - Good investment because people want it
                - https://www.businesswire.com/news/home/20200724005173/en/135.3-Billion-Worldwide-Smart-Home-Industry-to-2025---Featuring-Schneider-Electric-United-Technologies-Amazon-Among-Others---ResearchAndMarkets.com
                - **Find statistics of demand**
                - https://www.statista.com/forecasts/887613/number-of-smart-homes-in-the-smart-home-market-worldwide good graph to add
    - House seller(200 words)
        - Problem
            - Difficult to make a house stand out
            - Housing market is competitive
                - "A large supply of housing with limited effective demand caused exacerbating competition on the property market. Ordinary advertising, housing plans or good visualization are more often insufficient tools to attract buyers." https://content.sciendo.com/downloadpdf/journals/remav/21/1/article-p69.xml#:~:text=In%20the%20economic%20theory%2C%20competition,principle%20of%20the%20free%20market.&text=The%20competition%20in%20the%20real,transactions%2C%20which%20require%20the%20purchaser.
            - Need an extra selling point
            - Old homes with no smart features will become obsolete
        - Solution
            - Include our smart home devices to make the house stand out
            - Will be able to compete with challenges of future automation
    - Resident(200 words)
        - Problem

                - Motion impairment that makes turning on stuff difficult

                - With smart homes competitors you need an app for every device, and often smart home and security systems are two different things
                - complicated
            - Solution
                - Our product will let you turn stuff on from the comfort of your own sofa
                    - http://www.modernsmarthome.com/how-smart-homes-can-empower-disabled-homeowners/
                    - Elderly
                    - Any motion impaired person
                - Only one platform - easier to use

Core elements (800 words)

- Explain nodes (should be 200 words but it probably will be 600)
    - 1RP for front door
    - 2RP for emergency
        - Security sensors activated if values are too high (smoke, co2, damp)
        - 1 RP on the ceiling for
            - Smoke detector
            - Co2 detector
        - 1RP on the floor for
            - Damp sensor
    - 1 RP
        - Speaker
        - Motion sensor
    - 1RP for each light switch
        - Motion sensor has a low value -> light is turned off
    - 1 RP
        - Door and window
    - 1RP for heating system
        - Heating activated depending on temperature
            - Heater button presser
            - Temperature sensor
- Explain gateway (100 words - good luck)
    - 1 main gateway controller to connect all raspberry pis
- Simulating sensors(100 words)
    - Scripts
    - Unit tests
        - Insert pseudocode example for one of the sensors
    - Preset JSON file, but we will also test the disco
- Set up (100 words)
    - Set up on discord, where the user will be asked through a series of question
        - His name
        - Name of each room that has our products

        - The products in that room and how they are divided into nodes (maybe)
        - Name of each light
    - Save this to JSON
- How we store their data (100 words - good luck)
    - After set up, discord sends us a list of all the customer's devices and their nodes
    - Possible future automation system that adds the email info to a spreadsheet?
    - So when we have to update them we have a list of who has what
- Use of appropriate IoT protocols and technologies for data transport between sensor nodes, gateway(s), and any cloud service(s). (100 words)
    - No idea what this means
- Use of appropriate standards for describing data including observations, devices, and deployments. (100 words)
    - ???

GDPR principles (200 words)

- How our product follows them
    - Needs to be researched

Conclusion (250 words)

- Summarise why our product is useful
    - Solves all these problems (summary of stakeholder part)
    - Has demand
- Say how our product is designed efficiently
- Mention that it follows gdpr principles