Vision Document

Iteration III

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Team 5

1 Introduction

1.1 Purpose

The purpose of this document is to outline the vision for the system of the Coffee Machine and describe the high-level requirements. It will especially focus on the following:

- Identify the problems and constraints that the customer is experiencing with the current prototype of the product.

- Collect and explain the customer's demands and requests on the new system.

- Introduce a solution.

- Identify any issues or constraints with the solution.

- Identify the stakeholders and users.

- Present the product development team.

1.2 Scope

The Scope of this document is the Coffee Managment System for Softwerk AB. The System is in development by Team 5 and is developed for the ISEP project. The Information for this document was collected from the ISEP Introduction document and two meetings with the customer.

2 Problem Statement

2.1 The problem of:

- No user friendly way to remotely switch on/off the coffee machine.
- Not being able to remotely see the current status of the coffee machine.
- Not having any statistics on by who, when, and how often the coffee machine is used.

2.2 Affects:

- The employees of the company.
- The coffee budget.
- The overall productivity of the employees in the company.

2.3 Causing the impact of:

- An unreliable way to control the coffee maker.
- An unnecessarily complicated way to control the coffee machine via SSH and VPN.
- No one to be held responsible if the coffee machine is switched on/off when it is not supposed to.
- No way to keep track of coffee expenses, as well as the overall coffee consumption in the company.

2.4 A solution provides:

- Comfortability and security, knowing that the coffee always will be ready when you arrive at the office.
- An overall higher usability of the coffee machine.
- A solid base to develop new features on top of.
- Higher productivity with fewer and shorter interruptions throughout the day to check the state of the coffee machine.

3   Product Features

3.1   Musts

The solution must:

- have a web-interface to control the coffee machine through the raspberry pi.

- have a mobile friendly design.

- have a user management system allowing for users to be created, updated, deleted and deactivated.

- be able to view the current status of the coffee machine and change it.

- provide secured login through the use of a SSL certificate.

3.2   Shoulds

The solution should:

- provide protection from account hacking by locking any user account that gets accessed with incorrect data too many times.

- provide a comfortable way to log in without having to enter login data.

- be able to give information about every user of the program.

- show statistics filtered by users and time frame.

- keep track of statistics concerning coffee consumption.

- have a status history to keep track of interactions.

- have a visual representation of statistics in form of a pie chart and a histogram.

3.3 Mays

The solution may:

- be ported to android.

- enable automatic start when users approach.

- display a video of the coffee machine for the user to see if the coffee is done.

- be able to recognize if coffee is done by the use of image recognition.

- have an exterior design, wooden with a big switch that changes the state of the coffee machine.

- have a physical button that changes the state of the coffee machine.

- have an indicator to show that the users needs to buy more coffee.

4 Constraints

4.1 Design

- The system must use a layered architecture. A server in the bottom, using an API, with an abstraction layer in the middle that communicates with the website on top.

- The user interface must be responsive and modern.

- The system should be based on the existing proof of concept prototype hardware, which is a Raspberry PI with a semiconductor relay connected to it.

4.2 Time

- The project must be done and all documentation must be handed in by the end of May.

- The first working prototype must be presented on March 11 at the latest.

4.3 Hardware

- The system must use the provided hardware parts - a Raspberry PI, a semiconductor relay, and an extension cord.

- The user hardware to access the coffee machine includes mobile devices running android, PC's (Linux, Windows), and Macs.

5 Risks

Risks of the project include:

- Insufficient knowledge of the technologies to be used (Raspberry Pi, Android, ...).

- Only part of the team has the Raspberry PI physically available.

- Bad communication with the customer.

- Not fully understanding the customer's requirements

- Insufficient amount of testing due to the fact that only one part of the team has the Raspberry Pi.

- More members drop out from the project, which could lead to a staff shortage.

- Too short of a time budget which may cause an unfinished, or insufficiently developed product.

6 Stakeholders and User Descriptions

6.1 Stakeholders

- **Softwerk AB, Dr. Rüdiger Lincke**
    - The client of the project.
    - Monitors the project.
    - Evaluates the solution quality and design.
- **Softwerk AB, the employees**
    - The users of the product.
    - Involved in the late testing part of the project.
- **Team 5 at the ISEP project**
    - Directly involved with the project.
    - Individually graded based on effort.
    - Individually graded based on the solution quality.
- **Jesper Andersson, ISEP responsible**
    - Monitors the project.
    - Evaluates the solution quality and design.
    - Sets the grades of the projects.
- **Apostolos Ampatzoglou, ISEP responsible**
    - Monitors the project.
    - Evaluates the solution quality and design.
    - Sets the grades of the projects.

6.2 User Descriptions

- **The employees of Softwerk AB.**
    - The employees are experienced developers.
    - They have high expectations of the solution.

7 Project Team Members

Resource	Project Role	Area Represented
Efrén Martin Garcia	Global Team Leader	Planning
Joost Ouwerling	Dutch Team Leader	Planning, Development
Ted Sundström	Analysist (Lead) and Tester	Analysis and Testing
Jose Jimenez Hernandez	Designer (Lead)	Design
Robert Hallink	Designer	Design
Julian Vos	Developer (Lead)	Development
Ronald Kruizinga	Developer	Development
Florian Schiedt	Tester (Lead) and Analysist	Testing and Analysis