the FIRMA
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NFC tag system with a UI
PROJECT PLAN

Accepted by	Document version	Acceptance date	Signature
<the FIRMA project manager>	0.1	16.01.2020	Ikhlas Jenfi
<Customer>	0.1	16.01.2020	theFIRMA

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Version history

Version	Modified by	Change
0.1	Ikhlas Jenfi	Initial version created

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Table of Contents

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1. Introduction

1.1 Introduction and Project Goal

In theFIRMA, all interns and students mark their hours done weekly in an excel sheet. Which in this case, supervisors in the company can't really check if those students/interns are being honest about their hours.

While thinking for an idea for my Bachelor's thesis, I came out with the idea of having an NFC system that counts the total hours for interns and students in theFIRMA.

1.2 Project Scope and Outcome

The scope of this project is to implement a user interface in a www-page which will allow the system administrator in theFIRMA to add a new student or intern by their NFC id, student id, first name and last name. Those will be added automatically in the database by clicking a submit button. Next, while putting the NFC tag in the NFC, it will automatically detect the student/intern with the data and time (s)he signed in, and if the tag is again put in the NFC, it will log out the student/intern by day and time and the total hours will be calculated by database.

The outcome of this project:

- User interface
- Database
- NFC system

1.3 Project Limitations

Only the NFC tag directed the NFC system can work, any other tag will not be detected.

Database will be only on local server, and only system administrator can have access to it.

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2. Organization

2.1 the FIRMA Project Group

Name	Role	Contact information
Ikhlas Jenfi	Project manager / Developer	0417018193 / ikhlasjenfi@edu.turkuamk.fi

2.2 Customer Information

Company: theFIRMA

Customer name	Role	Contact information
theFIRMA	Project manager/owner	0449072080 / thefirma@edu.turkuamk.fi Joukahaisenkatu 3-5, 20520 Turku

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3. Project Implementation Plan

3.1 Schedule

Project start date: 06.01.2020

Preliminary schedule:

Alpha: By 09.03.2020, the UI with database getting the data shall be finished.
Beta: By 17.04.2020, the NFC system shall be implemented.
Gold/release: By 30.04.2020 all system shall be released.

3.2 Cost Estimate

The costs of this project are:

- NFC (PN or RC modules) / RFID : ~30euros
- Raspberry Pi 4 model B: ~70euros
- Bredboard kit / Jumper wires (female dual + male dual): ~20euros
- SD card 32GB: ~9euros
- NFC / RFID tag : ~10euros

3.3 Resource plan

the FIRMA project group's preliminary allocation to this project.

Name	Hours/week	Notes
Ikhlas Jenfi	37,5h/week	Not available on the 17th and 18th of February 2020.

3.4 Software and Hardware

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Software	Hardware
- Raspbian OS - MobaXterm - Libraries needed for the development - Python as a programming language - PhpMyAdmin as a database - HTML & CSS for user interface - UwAmp: for running localhost - XAMPP control panel / Apache / PhpMyAdmin - PHP - Python	- RFiD reader that support NFC also, or vice versa. - Jumper wire that support the RFiD reader "if needed" + 6x female to female + 6x male to female - Raspberry Pi 4 + Power supply + SD card + BreadBoard "depends on the NFC or RFiD reader" (Will be borrowed from the embedded lab) - RfiD tag

3.5 Outcome Delivery

The project will be delivered to the customer as a system where you sign in and sign out by a NFC or RFID tag which will send the data to the database and the total of hours will be calculated.

4. Project management plan

4.1 Meetings and communication

Internal meetings and communication: All meeting will be scheduled with my commissioner.

4.2 Documentation Storage and Code Repository

All document/code/specifications are to be saved in my Git and my drive.
All code/document are all the time in a place where I can only access them.
All code is pushed to the repository at least at the end of each working week.

4.3 Project Quality Goals

In the end of each week, my code will be reviewed and tested. Before the initial release, the system will be well tested and verified.

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4.3.1 Requirement specification

- The product can only be used in theFIRMA environment, other than that the parameters need to be changed.
- Product should not be touched by water.

4.3.2 Test plan

After each preliminary schedule, a test should occur. The test will be done by Ikhlas Jenfi, and re-done by theFIRMA members. The test cases will be created according to the task in point.

4.3.3. Code review plan

The code will be reviewed by my commissioner/project owner in each deadline of the preliminary schedule.

4.4 Project Risk Analysis(later)

<List here a few risks and the action plan how to avoid the risk and/or mitigate the consequences. Make sure you know what is a risk and what is a consequence of a risk. For example: “Project runs late” is not a risk, but a consequence. “Project manager has a flu” is not a risk, but leads to problems if the project communication and documentation has been bad. “The technology X used in this project is unfamiliar to project members” is a risk.>

Risk name and consequence	How to avoid	Plan B

REFERENCES

- No references at the moment.