Spring 2023 ECE 445 Team Contract

Project No. and Name	Project #42
Member Name, netID	Brennan Eng, bheng2
Member Name, netID	Edson Alpizar, alpizar2
Member Name, netID	Ege Gunal , egeg2

Project Description

Our project tries to help increase efficiency between consumers and owners of establishments, by introducing NFC bracelets and an NFC Reader-Security System. Our NFC bracelets will be reprogrammable with any information the owners of establishments wish. For example, they can be programmed to have unique identification numbers as well as users' credit/debit card information. The NFC reader system in our project will contain an ultrasonic sensor that would be used to count and log the number of people that enter an establishment when they scan their bracelets. If people are following protocol a scan should equal one person which will be verified by the ultrasonic sensor. This we believe will help reduce random people entering the owner's establishment because it makes the user who has multiple readings of people entering the establishment per scan liable for any problems that may involve those people.

Project Goals

If my team is successful, we will have hardware that can:

- Accurately read NFC bracelets and have a visual indicator of whether a user is valid to enter or not.
- Be able to correctly write information to NFC bracelets.
- Have proper wireless communication between our local server and NFC Reader-Security System.
- Have a functional ultrasonic sensor that can count how many people enter an establishment.
- Be able to determine if a user has valid entry or not within the millisecond range.

Our functioning software will be able to:

- Read information from NFC bracelets.
- Have localized server in SQL that will act as our database.
- Send information from the ultrasonic sensor to the local server.
- Be able to display the information that a bracelet can contain.

Expectations (ground rules) for each member

The expectations for each member are as follows:

- Each member is expected to attend all group meetings at the time we decide.
- Each member should participate and or give feedback on the topic at hand.
- Members are expected to communicate with the entire group whenever an inconvenience arises in a timely manner.
- Members are expected to treat each other with respect.
- Members are expected to work on their tasks in a timely manner.
- Members should be communicating any progress they make on the project so we can work as efficiently as possible.

Roles

The members of this team include two computer engineers and one electrical engineer. The computer engineers can effectively work on the software portions of the project. As a group we can collectively work on any schematics and PCB design. Any soldering that needs to happen can be done by any member that feels the most confident in doing so. Our project is not hardware heavy so it is possible to have different members work on different parts to maximize our time efficiency. Any task a member assigns himself will be responsible for completing it during the specified time period so that we may not fall behind.

Project Meeting Time(s)

Our team will be meeting with our TA most Tuesdays at 5 p.m. at the Electrical and Computer Engineering Building in room 3015. Besides our TA meetings, our team can meet at the lab at least once during the week. All the members have flexible schedules so determining an appropriate time to meet at the lab can be arranged.

Agenda

The agenda will be set by the entire group. We will set weekly goals to make sure we stay on track. We understand issues can come about but we will be reasonable and respectful, and vote on any changes that need to be made; such as changing a deadline we set for ourselves. Edson will be responsible for keeping records of the progress we have made and keeping every member of the group engaged.

Process and penalties for dealing with team issues

If any problems arise with a group member the remaining group members will intervene and have a dedicated discussion with said member. We are reasonable adults so we will listen to what group members have to say and make well thought out decisions, but if a situation were to escalate then we would ask a TA or instructor for their opinion on how to handle the situation.

End-of-term agreement on using final peer assessment for grade adjustment.

We believe this contract reflects all our values and concerns. That means this contract makes each member accountable to its contents. If all members follow the contract, we should all be able to receive a proper grade during the final peer assessment.

Signatures

I affirm that I participated in generating this team charter and that I will abide by its contents to the best of my ability. Furthermore, I understand that failure to meet the expectations expressed here can lead to the stated consequences.

netID: alpizar2   (digital) Signature: Edson Alpizar   Date: 02/24/2023

netID: egeg2   (digital) Signature: Ege Gunal   Date: 02/24/2023

netID: bheng2   (digital) Signature: Brennan Eng   Date: 02/24/2023