School of Computing
CA326 Year 3 Project Proposal Form

SECTION A

Project Title: Sonic
Student 1 Name: Jason Henderson   ID Number: 19309916
Student 2 Name: Conor Joyce   ID Number: 19425804
Staff Member Consulted for supervision: Stephen Blott

Project Description (2 pages max)

Introduction

Nowadays, contact tracing due to Covid-19 is very important, and the common solution of manually taking customer information at the door of a restaurant or venue is inefficient and tedious in our opinion. We would like to propose a better solution which improves ease of use, speed and reliability via nfc tags and scanners instead of phone numbers and paper forms.

Outline

This project will consist of creating nfc tag scanners that will be programmed to log and send occupancy data to a backbone server. This information can then be used for contact tracing purposes.

Background

The ideas came from a smaller idea that we had to create an app for the college campus to log occupancy of a given room and show what rooms are free or in use. When proposing this idea to our supervisor that is when we came up with the bigger idea of expanding the scope of this and creating a contact tracing app/site that is more generalised.

Goals

The project will aim to achieve something similar to the everyday covid contact tracing app we see and use at this current time, but be created for use within a specific location or building using nfc tags.
This is useful and relevant nowadays with the Covid-19 pandemic, and an efficient way of performing contact tracing at the door of a building would be very useful and easier to manage than manually taking customer information at the door.

Programming language(s) and tools

Go, Python, Docker, Make, Redis

Breakdown of work

Ideally we would do some amount of work together via pair programming for example, as both of us should be familiar with every part of the project.
Realistically, we can split the focus based on what each of us are more experienced and/or skilled in.
Overall we would both like to learn more from working on this project with new technologies and other programming tools that we do not have as much experience with up until now.

Student 1

Jason: More experience in Python, database management and hardware, and will focus a lot more on the client side with the nfc tags and scanners.

Student 2

Conor: More experience with Go and Docker, and will focus a lot on the development side of things in Docker and the backbone server which is to be written in Go.