School of Computing  
CA326 Year 3 Project Proposal Form

**SECTION A**

**Project Title** TouchTime

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**Staff Member Consulted:** Dr. Donal Fitzpatrick

**Project Description (1-2 pages):**

Our third year project will be an accessible iOS App that will allow users (with an iPhone 6s or above) through it’s built-in NFC capabilities to scan tags we have placed in various locations outside buildings or lecture halls on the DCU Glasnevin Campus and using Apple’s built-in text-to-speech function speak back information about the building or room.

We will implement a scraper that will pull timetables for the desired room and store this information to be queried by the user when required. We will pull this information daily as timetables are subject to change and will not have direct access to the ISS feed.

We will parse the information and use the text-to-speech function mentioned previously for accessibility features. This will mean our app throughout this functionality and it’s interface will be as accessible as possible.

Information can be scanned via NFC tags that will be initially placed on every door in the new Stokes Building and the Lonsdale (Computing) Building. There is potential to scale up and place tags on every door on the DCU Glasnevin Campus. We will use a basic NFC tag writer to put room identification on the appropriate tag, once scanned this information will be used to query the timetable for said room.

The user will also be able to input their course code and year of study to the app and will provide them with spoken and visual information about room number and building of their next class/tutorial/lab.

There is also scope for us to include different languages and potentially scan student cards using their built in NFC chip to pull timetable information. This will depend on DCU university policies regarding use of student numbers etc.

**Programming language(s)**

* Swift
* Javascript (NodeJS)
* Python (Beautiful Soup)

**Programming tool(s):**

* XCode
* Sublime Text/Atom
* IntelliJ (client-side)

**Learning Challenges**:

* Server side development
* Swift
* NFC Functionality
* Server-Side javascript
* Scraping Websites (Beautiful Soup)
* Git

**Hardware / software platform:**

* Xcode/iOS
* GitLab

**Special hardware / software requirements**:

* NFC Tag Reader/Writer
* NFC Chips
* Extras to be determined