

School of Computing

CA326 Year 3 Project Proposal Form

SECTION A

Project Title: bookDCU— Room Booking System for DCU Staff & Students

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Staff Member Consulted for supervision: Dr Tracey Mehigan

Project Description

Introduction

After finding a lack of an overall booking system for all educational aids such as study rooms and meeting rooms, and the lack of being able to book a seat in a project lab we decided to build a web app which act as a booking service for the above. Our system will act as booking service for all bookable rooms across DCU campuses. The system will list all rooms with availability and capacity for each room. As well as being able to book rooms students in project years will be able to book a slot for a specific seat in the dedicated project lab guaranteeing them a quiet place to work.

The project aims to solve a problem faced by DCU students. We found there is a lack of a proper booking system to reserve meeting rooms or study rooms across campuses.

Outline

Our proposed project is to design and build a system that will allow any DCU staff member or student to book a room for a meeting or study, as well as book a seat in a computer lab giving them a space to work on projects, such as third and fourth-year School of Computing projects.

Background

The idea for the project came about after both of us faced difficulty in booking a space to work on group projects and study. The library currently has a system in place, but this system is cumbersome and does not extend to other rooms on campus. For those, one is required to send an email and hope for a reply, which is far from ideal. Our solution to this is to build one system that will cover all rooms on all campuses, removing confusion for end users.

Goals

This project aims to remove the hassle caused by the system used for booking study spaces on campus and replace it with something that is modern, unified, and easy-to-use.

Why? It will remove uncertainty for students as to how one should go about booking a space for study or groupwork. Currently the library uses its own system and the rest of DCU does not have a system.

When? Any time a student needs a space to conduct groupwork, a project or study, particularly in the lead-up to exams or project deadlines.

How? It will remove the fragmentation of the current system and make all spaces available to book from the one place, clearly indicating what spaces are available and when, what facilities are available in each space (e.g. power outlets) as well as the capacity of the space.

Programming language(s) and tools

Our aim is to build a web app using Django, the Django REST Framework and HTML, CSS & JavaScript. Data would be stored in an SQL database. We plan to do this using VS Code. We will also use Gitlab to keep track of the changes we make in our code and to ensure we both have the most recent version of our code.

What we will learn

- JavaScript
- Django bigger scale
- Security challenges
- How to use different user login to log into webapp

Testing Group

- Undergraduates, both computing and non-computing
- Postgraduates
- Faculty

Ethical approval

We will be needing ethical approval as our project requires user testing.

Breakdown of work

In general, we aim to work together on most parts of the project in a pair-programming fashion, with each of us being involved in all aspects of the project.

Student 1 — Scott

Specifically, Scott will work on the design and functionality of the web app, as well as the SQL database. Scott will work on the ethical approval form.

Student 2 — Nacé

Specifically, Nacé will work on the research and data compilation for the system as well as working on the backend development. Nacé will also work on the ethical approval form, Nacé will also work on what the testing pool will be.

Challenges

We hope to have students use their DCU Google accounts to log into the system, however this may prove to be too difficult or impossible. If we find that this is not possible we will have students register an account separately with their student number as their username.

Another challenge we may face is mapping the layout of all the rooms that may be offered on the platform. If this ends up taking too long, we may decide to initially focus on a small subset of rooms in the computing building which will be accurately mapped for the purpose of demonstrating the project.