# [Cover Page]

1. Project Title
2. Group Name
3. Group Members
4. Date (eg last update)

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# 1.1. Introduction

## A. Vision and Objectives

Pronto is a multi-purpose application that will be used by universities, lecturers, and students. Students will be able to create, edit and view custom timetables. Lecturers will be able to schedule reminders for important events like exams and project due dates, as well as notify them of assignment extensions. Institutions will be able to upload their university lecture schedules and campus maps. They will be able to maintain an institution page. This application aims to help students organise their schedules and also bring together the features of reminders, navigation, and lecture timetables into a single application.

## B. Business Need

Currently, there is no single consolidated application that allows students from any higher education institution to create a timetable based on the modules they are taking. Features for different parts of the application exist in isolation, and we intend to design a system that brings these features into a single place for any student of any university.

## C. Project Scope

**Defining deliverables**

The scope of the project involves developing a proof of concept web/mobile application using Amazon Web Services (AWS) as the underlying infrastructure. The core functionalities and features that we need to develop include:

I. User registration and authentication
- Users, including students, institutions, and lecturers, will be able to create accounts and authenticate themselves to access the application.
- Users will be assigned different roles that will enable them to use the system differently based on their user group.

II. Timetable generation:
- Students will be able to create schedules based on their module choices, and also view assignment deadlines, upcoming tests and examination schedules, and other important events.
- They can also set reminders and define how they would like to receive notifications for upcoming tasks. (E-mail, SMS, or push notifications)

III. Institution pages:
- Institutions will have the ability to create and maintain their own pages within the application. This includes updating their images and descriptions.
- They can load and update student schedules, campus maps, assignment deadlines, test and examination schedules, and other relevant information.

Students will be able to access these documents and relevant information by visiting their page.

### IV. Processing lecture schedules:

The application will allow institutions to upload their lecture schedules in the form of a .csv or .xls file, which will then be processed and stored so that a student can search for a module and have its information generated for their timetable.

### V. Notifications:

The application will allow for three notification types that the user can select :

- Push
- Sms
- Email

Students can set which type of notification they would like to receive from these options.

### VI. Mobile support

The application should be accessible and responsive on mobile devices, allowing students to conveniently access their tasks and receive notifications on the go.

### VII. Web support

Users that are universities or lecturers will use an application with a web view to create their accounts, manage their pages, and set reminders respectively.

### VIII. Reminders

The application will provide reminders to students for upcoming deadlines, events, or any updates from their institutions. These will be presented to the user via the notifications subsystem

Additionally, the optional functionalities and features that we would like to develop include:

### IX. Geo-location services

Students should be able to use a map service within the application that will give them directions to a lecture hall from their current location. This service will use a walking distance calculator to work out the time required to navigate between the lecture venues.

## X. Extracting and transforming the lecture schedule

When an institution uploads its lecture schedule, we would like to take the provided format and transform it into a standard format for storage and consistency purposes. With this, inconsistencies with naming formats can be addressed.

As it stands, we plan to be finished with the core deliverables by the 24th of July 2023. Thereafter, development on the optional deliverables will begin and finish by the 20th of September 2023.

**Identifying constraints**

- All modules and tools used outside of AWS services should be open source and documented.
- All data that we store needs to be stored and used securely. Privacy of users should be taken into account with the design, making sure to consider POP, GDPR, PII, etc.

*[insert milestones here once decided]

## 2.2. Diagrams

A. Use case Diagram
B. Class Diagram
C. High Level Architecture