

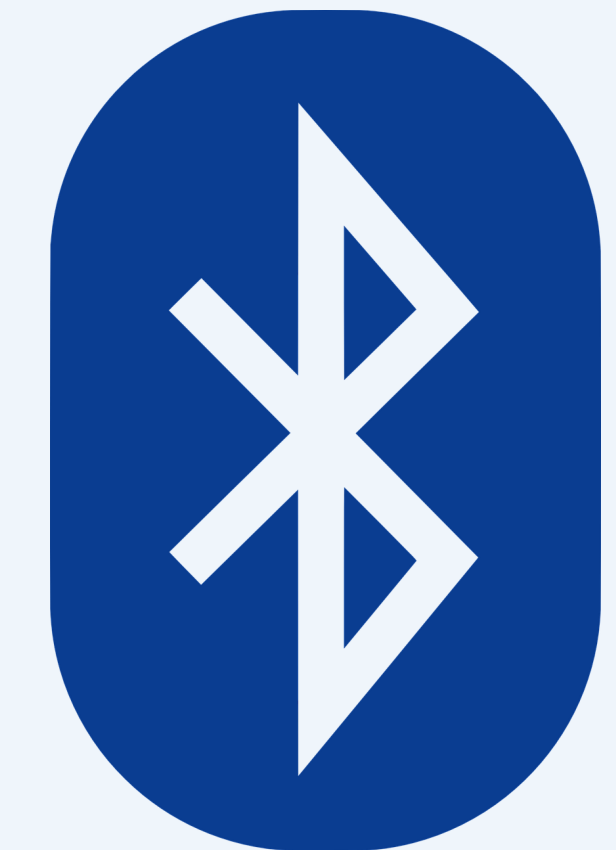
Track and trace system for Bangor University

Introduction

The aim of this project is to create a Track and trace system for Bangor University, to prevent the spread of Covid-19 to protect all staff and students.

As the possibility of returning to on-campus learning in Wales is becoming more likely, we need to work together as a University to create a more covid-safe environment . This will include using a track and trace system to ensure any positive cases are unable to spread and kept to a minimum.

A track and trace system needs to be actively used by the majority of the userbase to be considered effective. As user privacy is one of the key issues when creating a tracking app, my biggest challenge is to find a method of tracking which is trusted by all users.

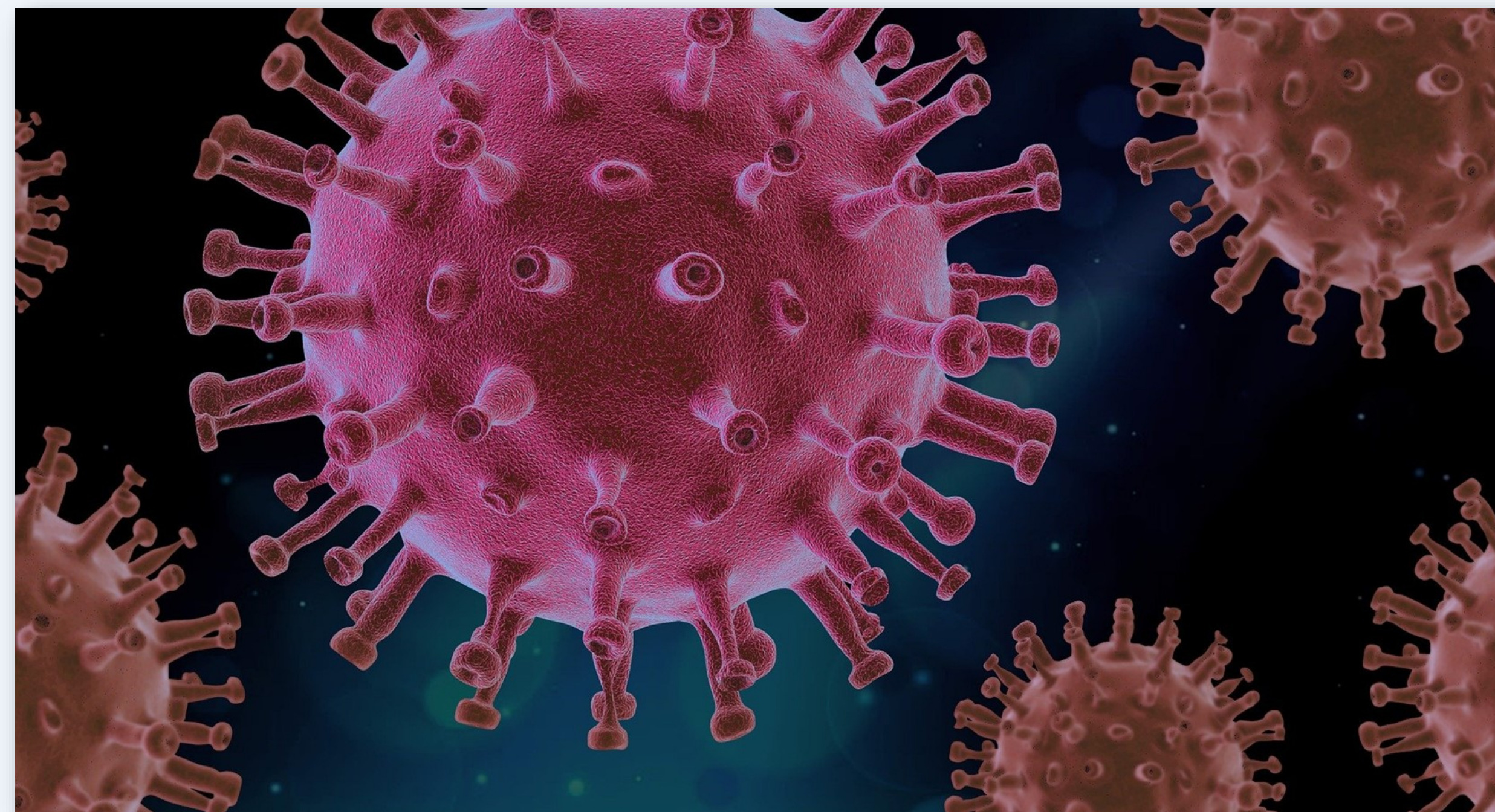


Application Information

The system will be using a smartphone application created in Android studio using Java as the programming language, this will be linked to a SQL database.

Privacy is one of the main concerns for users of track and trace systems, this is why the only personal information shared with the app is the username of the student/staff, no GPS tracking or Bluetooth technology will be used.

Users will use the smartphone application to scan a QR code to check in to a room on campus, check-in information will then be stored in a protected centralised database. If a positive test is reported, all users who may have come in contact with the infected user will be notified.



Problems with existing systems

The majority of track and trace applications have opted for Bluetooth as their method to detect contact between users. This has proved to be an efficient method but isn't always accurate. Connections can be made without consideration towards the environment the users are currently in. Covid is more likely to spread indoors than outside but this isn't considered and the distance between two users to make a connection remains the same. This will lead to false reports of close contact.

Another major issue with using Bluetooth is people do not like to be monitored 24/7, Bluetooth is less intrusive than GPS but it is possible to figure out a persons movement once they test positive as their identity will be revealed if they agree to help