# Serious Cyber Security: Building Games to Educate University Students about Security

**Module:** CO600

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Description automatically generatedGamification is a well-known method for widening participation and take-up of various topics. In this project, the aim will be to use gamification (or simply, the making of well-purposed and situated games) to support university students (e.g., undergraduates) learning about cyber security. A lot of research has been done into the use of games to teach the general public, and gamifying entire university modules, but there has been limited research into using games to teach university students as part of their study. The focus of this project is to educate. With the intention to find out if use of gamification techniques is effective in solidifying the knowledge gained during university lectures.

## Project Phases:

1. Create a unity game in which the user moves through several levels which focus on a different topic from the CO634 lectures, answering questions as they go to solidify knowledge.
2. A user study where users can report on their understanding before and after playing through the game. The user study also allows for bug reporting and improvement of the core game.
3. A report that analyses the effectiveness of the game and gamification techniques in educating university undergraduates.

During the user study, participants will be encouraged to fill in an online form. They will fill out the first section to get a baseline for their understanding of cyber security topics and to gain some information about the current use of games in education. They will then play through the game during a LECSEM; attempting to complete the game during that time. Once the user has completed the game, they can fill out the second part of the form. The second part will go over some of the questions from the first part to see how participants understanding has changed. They will also be given the opportunity to respond with their favourite and least favourite parts of the game and report any bugs they may have found.