# SE507μ Hacking Password Hashes with Rainbow Tables

## Project 1: Securing a password database

This assessment evaluates the following competencies:

- *CS007 – Understand why it is important to store passwords carefully*                    *(+1)*
- *CS210 – Understand how passwords can be stored securely in databases*                   *(+1)*
- *CS205 – Write an application that stores passwords securely*                            *(+2)*

You may also be assessed on the following competencies:

- *CS901 – Understand how passwords database can be attacked*                              *(+2)*

In this project assessment, you have to secure the password database used in a project that you have been working on. For this, you have to use, at least, a technique similar to the Unix scheme using a secure hash function and a salt, to protect your passwords. To succeed the assessment, you have to:

1. Show your application to the teacher and explain him/her how you secured the password database.

2. Explain him against which attacks your password database is better protected thanks to what you put in place.

3. Make a demonstration of your application, in particular for the part creating a new password and the part checking one.

Optionally, you can analyse the security of your application and explain how a threatening agent could be attacking your system and steal passwords. Think about several attack possibilities [1] and explain the scenarios you imagined to your teacher.

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[1]Do not only focus on the passwords from the database, but also on the database itself, for example.