

CSU34031 Project 2

Securing the Cloud

The aim of this project is to develop a secure cloud storage application for Dropbox, Box, Google Drive, Office365 etc. For example, your application will secure all files that are uploaded to the cloud, such that only people that are part of your “Secure Cloud Storage Group” will be able to decrypt uploaded files. Any member of the group should be able to upload encrypted files to the cloud service. To all other users the files will be encrypted.

You are required to design and implement a suitable **key management** system for your application which employs **public-key certificates** that allows users of the system to **share files securely**, and also allows one to **add or remove users** from the group. You are free to implement your application for a desktop or mobile platform and make use of any open source cryptographic libraries.

Note

- You should provide a high-level description of the protocol design and implementation. A listing of the code should also be provided along with meaningful comments. You are required to submit a **single PDF** file containing the documentation and code through Blackboard.
- You must also provide a short **video demonstration** of your work. In the video (**5 mins max**) you should demonstrate a working prototype, explain your design choices, talk through parts of your code which implement important aspects of your work.
- All submitted work **must** be original and your own. Please familiarize yourself with the College Plagiarism guidelines - <https://www.tcd.ie/undergraduate-studies/general-regulations/plagiarism.php>. Submissions that are similar to each other will result in zero marks being awarded to all parties that are identified.
- Late submissions will **not** be accepted unless accompanied by a medical certificate.
- This project is worth 10% of the marks and will be graded out of 100 marks

Deadline for submission is 23:59hrs on Sunday the 16th of April