School of Computing  
CA326 Year 3 Project Proposal Form

**SECTION A**

**Project Title:** Elect

**Student 1 Name:** Jake Grogan **ID Number:** 16456346

**Student 2 Name**: Martynas Urbanavicius **ID Number:** 15485084

**Staff Member Consulted:** Stephen Blott

**Project Description** (1-2 pages):

The premise of this web application is to allow clubs, societies, groups and organisations to carry out votes for elections. Users who wish to conduct a vote or election will have the following options:

* **Straw poll** - This is an unofficial ballot conducted as a test of opinion
* **Plurality Electoral System** - Also called "winner takes all" or "highest vote wins"
* **Majority Electoral System** - A first round vote requires a majority vote ("51%+"). If nobody gets a majority vote, a second voting round takes place where the top x number of candidates from round 1 enter into the second voting round.
* **Proportional Representation** - If a group/party receive x% of the votes, they get x% of the seats
* **Single Transferable Vote** - Voters pick their top 3 candidates if the top candidate has surpassed the quota, the vote is transferred to the second candidate and so on.

Creators of polls/elections will have the option to customise the voting environment. For example, creators will have the option to restrict the votes to only accept votes from certain email addresses. They will also have the option to display to everyone in the vote, who voted but not who they voted for, this gives a degree of transparency and helps ensure people who aren't supposed to vote haven't. It also ensures there isn’t any cheating in the votes (People haven’t voted twice or made fake email accounts). Creators will also have the option to enable IP tracking on open straw polls so that voters should be deterred from voting more than once.

Once a vote is created a unique shareable URL will be given which will be used to access the voting page.

**Programming languages**

HTML, CSS, Javascript, NoSQL, Typescript

**Programming Tools**

NodeJS, ExpressJS, MongoDB, Bootstrap, Angular 6, Jasmin (Unit testing), Karma (Test Runner), OAuth (Google Authentication)

**Learning Challenges**

REST API’s, AWS, MongoDB, OAuth

**Hardware / software platform**

Linux, AWS

**Special hardware / software requirements**

None