

## Scenario 1 - University Domination

In the not-too-distant future, the University of York campus has been taken over by a number of rival student gangs, including the Derwents and the Langwiths. Campus has been divided up into a number of sectors, and the gangs constantly engage with each other (non-violently!) to take over territory. You are to build a turn-based strategy game of conquest and diplomacy, set on the University of York campus. Turns rotate between players (there must be at least two players) who, in each turn, attempt to conquer sectors/territory by moving a number of their gang members. In each turn, a player may choose to *attack* across a boundary of any of their currently held sectors (against an opposing gang), move gang members into a sector the gang currently holds, or pass. If attacking an opposing gang, there is a mechanism (e.g., random dice rolls) for determining the outcome of the attack and defense. The game finishes when only one gang holds all the sectors or when all other gangs have been eliminated. Your game will ultimately have the following capabilities.

- A graphical user interface, which presents a map of the University, subdivided into *sectors*. Sectors may be of different sizes and shapes, but should ideally identify notorious campus landmarks.
- A mechanism for deciding how to resolve conflicts, i.e., the Derwents attacking a sector held by the Langwithians. Conflicts should not in general be resolved in a completely random manner: the relative strengths of the opposing gangs should be taken into account.
- A mechanism for calculating how many new gang members each gang receives in each turn (this could take into account successes or failures in previous turns); new gang members can be allocated to *held* sectors.
- A *bonus* mechanism where at the end of each turn where a gang has captured a sector, a bonus is awarded. It should be possible to convert bonuses into gang members in subsequent turns. You should be creative in your definition of the bonus mechanism!
- At least one sector should contain a hidden Pro-Vice Chancellor. Should this sector be captured, the gang who captured the PVC should be awarded an additional bonus. This bonus would be awarded for subsequent re-capturings too. There should be a mini-game that is playable once the PVC sector has been captured.
- It should be possible to save and pause the game at any time.

At the start of the game, all sectors are unclaimed. Each sector should be allocated (by some random mechanism) to a gang. In two player mode, there should be a third “neutral” player controlled by game itself, but this neutral player can only defend, will not attack, and will never receive reinforcements.

### Constraints

You are building a game that should be playable and enjoyable by your SEPR cohort. However, there are two stakeholders that you must also accommodate.

- The customer: one of your lecturers will play the role of a customer who is interested in eventually trying to market and sell your game. Ultimately the customer is the person you must convince of the validity of your assumptions and decisions. This stakeholder can be contacted as often as you need and at any time (but do not expect an instant reply!).
- The University of York Communications Office: who is interested in using your game for its own promotional activities, e.g., at Open Days, UCAS Days. Please note that you can only communicate with this stakeholder through the lecturers

### **Assessment 2 Requirements**

For Assessment 2 you are required to design and implement the *map*, the *conflict resolution* mechanism, and the mechanism for allocating new gang members. You should not implement the other features.





