

AC22005 - Computer Systems 2B

Coursework 1 - C# Array Game

This assignment is designed to give you practice in using C# to develop a simple game, considering both the UI (for visual appeal) and the program structure (for the gameplay).

Brief

Building on the practical exercises, your task is to develop a “tile based” game i.e. a game based around a grid of buttons. This will demonstrate a combination of a “design view”-constructed UI with components for entering your name and displaying a score etc. In addition to this, you will utilise code-generated UI components such as the grid of buttons. You should develop and design the game concept on paper prior to sitting down at Visual Studio.

The choice of game is yours - it may emulate an existing program (e.g. *Minesweeper*, *Tetris*), emulate a real game (e.g. *Connect 4*, *Boggle*), or be entirely new, but it should be based around an array of tiles/buttons, with some “programmed intelligence” behind the buttons to produce engaging gameplay, which may be by changing the colour, label or other properties of the buttons, or by altering the way in which the buttons interact with other buttons around them.

To attain the best possible mark you should “top” and “tail” the game giving it a defined entry point and defined end point. Your game should feature the skills covered in class and where possible go beyond this using timers and images to enhance your “product”.

Submission & Assessment

This coursework is due for submission via MyDundee (under AC22005 Assignments) at 5pm on Friday 7th February 2014 (Friday of Week 4) and is worth 13% of your total grade for this module. You should submit a ZIP file containing your **whole C# project folder** (including *all* source files and executable), a one-page **paper design** (photograph hand-drawn sketches if necessary) and a **written report** of 400-600 words (include a word count) describing your approach to the problem, any difficulties you encountered, and possible future enhancements to your game; you should also include rules for your game if these are not obvious or included in the game itself. Keep a copy of what you submit in case there are problems with your submission.

During the lab class in week 5, you will make a 5-minute presentation of your game to Dr Murray; this will constitute a part of the marking process for this coursework, so attendance is compulsory.

Marking Guidance

A fully working but very simple game (e.g. noughts and crosses) will achieve 40 marks (out of 80). A fully working and sophisticated game will achieve 58 marks out of 80. Marks will be lost for poor or incomplete gameplay or coding, or for a poorly constructed or unappealing user interface. Additional marks will be given for a particularly engaging user interface, sophisticated gameplay or other appropriate extra features (such as a high score table).

A well-written report which meets all the given guidelines, with a good demonstration and design document will achieve 15 marks (out of 20).

A simple solution with good report will thus achieve 55% (C2) while a complete solution with good report will thus achieve 73% (A3).