

**COMP H2033 Interactive Multimedia Feb 2015**

**Module leader: Dr. Matt Smith**

**Individual game project**

# IMPORTANT: Academic Honesty

This assignment is an **individual project**. The work you submit must be your own. It is fine for you to ask a lecturer or fellow student for assistance with the project, but the actual work created and submitted must be your own. Plagiarism and academic dishonesty can lead to failure of the module and other penalties outlined in the Institute’s rules and regulations.

Although you may download and use images and multimedia resources from other web sites for this project, **you must declare each of these sources**. The design of your system and the coding of the individual components must be your own. Your documentation must make it very clear which aspects of the project are:

* the work of others
* your adaptation of other’s work, and what your adaptations were

Discuss how to best declare the use of work from other sources with your lecturer(s).

By submitting your project for assessment you agree to the following:

“The material contained in this assignment is the author’s original work, except where work quoted is duly acknowledged in the text. No aspect of this assignment has been previously submitted for assessment in any other unit or course.”

# About the project

The project is a way for your to demonstrate your understanding and mastery of software development, and interactive multimedia – i.e. the project is your way to demonstrate what you have learnt in this module and related modules in the course. To complete this assignment you are required to

1. design and develop an ORIGINAL interactive, 3D multimedia computer game in Unity
   * coded in C# (not JavaScript!)

(b) demonstrate/defend it to your lecturer(s)

# Demonstration/Defense

You will be required to show your project work to your lecturer. This will involve demonstrating its features and answering questions about how the project was designed and constructed, and modifying the game as requested by the lecturer, to confirm your understanding of how it all works.

NOTE:

* No grade will be given for projects that have not been individually demonstrated/defended to the lecturer.

# Requirements

The game must demonstrate all the following:

* Using buttons to navigate between scenes (main menu / instructions / level 1 / game lost etc.)
* detecting 'collisions' between player and objects, or objects/objects
  + and different actions depending on what being ‘carried’ at time of collision  
    (e.g. if carrying key and hit door, then door opens, if not carrying key then error sounds plays)
* animation of object positions / properties
* instantiation of ‘prefab’ objects
  + statically
  + dynamically (e.g. arrows being fired / fish jumping from water)
* timers, and their graphical display
* audio, including all the following:
  + background sound (e.g. music)
  + sound effects
  + the triggering of actions when a sound finishes playing
* collecting / picking up objects
  + visually displaying to the user what they are carrying / status of carrying/not carrying
* at least 3 levels
  + level 1 = very easy (user getting to know how to move around in the game world)
  + level 2 is little bit challenging, but still every user should be able to complete it easily
  + level 3 harder to complete  
    (in some non-trivial way, e.g. not just reducing the time available – actual extra elements/challenges in this level …)

There needs to be a 'reason/motivation' for the game, examples:

* to collect 5 key's to open a door / treasure chest
* to kill all the bad guys and save the princess / prince
* to survive for as long as you can, avoiding the man-eating crocodiles or whatever.
* To reach the pot of gold at the end of the rainbow
* To be able to complete every maths question correctly …

Examples of the type of project you are to create include:

* maze or island or city game
* driving game
* number puzzle game (e.g. pick up numbers and operators to make a sum,
  + e.g. answer = 12, so need to pick up 4 then “times” then 3
  + (but more sophisticated …)
* language learning game
  + given image of cow, need to pick up word “bo” (Irish for Cow)
    - or collect word and picture in sequence
    - (but more sophisticated …)
  + need to collect 5 correct names to progress to level 2
    - level 1, animals – pictures and names
    - level 2, numbers and operators
    - etc.

Examples of the type of project you are NOT to create:

* Maze
* 2D game of any kind

# Marking criteria

The general criteria upon which the project will be assessed are:

* Originality
  + different from, and lots of ‘value added’ to, the gravity guy lab sheets
* Technical challenge
* Completeness
* Correctness
* Code Quality

# DEADLINES

* Part 1 – concept (not submitted/graded – bring PRINTED into lab for feedback)
  + Week 6 lab session (bring 2 pages into lab session: one page TYPED + screen sketch)
* Part 2 – design (not submitted/graded – bring PRINTED into lab for feedback)
  + Week 8 lab session (class diagram + feature list + software road map)
* Part 3 – game software (Moodle upload ZIP file)
  + **Week 10 – see Moodle for details**
  + (full Unity project folder + PC 32-bit standalone build + sources.txt document)

Note – EMAIL submissions are NOT accepted

Note – large files take a LONG TIME to upload to Moodle – don’t leave it to the last day!

Uploading from a college desktop computer will be MUCH faster than via wifi or from home …

Do NOT leave uploading until the last minute (or the last day even …)