

Contemporary Computer Science

Game Development and Multimedia Technologies

Summative Assignment – Hide and Seek in Durham

In this coursework, you are required to implement a game using either Pygame or Unity, asking a game player to seek for 10 treasures in our university campus. You are free to choose the game type, designing how your game works and what the game player can achieve based on the treasure hide and seek theme. Note that the focus of this coursework is game development rather than realistic graphics modeling.

To complete the coursework, L3 students should meet the criteria in part A, while L4 students should meet all criteria in part A and part B. Therefore, L3 students are scored out of 100 (part A only), and L4 students are scored out of 150 (part A and part B). The deadline for submission is the 17th January 2020 (2pm).

Part A (100%):

- Game design (10%)
- Core development (30%)
- Game mechanics (30%)
- Good use of game engine (15%)
- Demonstrate creativity (15%)

Part B (50%):

- Game optimisation (25%)
- Game configurability (25%)

For implementation, you should apply knowledge and methods you have learnt from the lectures. The **game specification form** provides a guidance on what technical aspects you should include in your implementation to meet the coursework criteria. You are required to fill in and return the form, providing a brief description of how your implemented game meets each of the criteria. **No mark will be given for your coursework if you do not fill in the form.** You may refer the lecture notes for the definition of the terms using in the form and the methods for implementing your game to meet each of the criteria.

Your submission should include the game specification form, your implementation with all source codes and resource files, a readme file showing instructions of how to run your game and what external resources you have adopted. You should compress all files into a single zip file and upload it to DUO for submission.

The level of achievement of each of the criteria in part A and part B is determined as follows:

Level of achievement:	Range of Marks
No implementation	0%
Inadequate or incomplete implementation	0 - 40%
Satisfactory to Good (in terms of correctness and completeness)	40 - 60%
Very Good to Excellent (in terms of completeness and robustness)	60 – 80%
Outstanding to Perfect (in terms of completeness, robustness and complexity)	80 - 100%

Game Specification Form

Student ID: _____

Level 3/4

Marking Criteria	Describe how your game matches the criteria
Game design (10%)	
Game Goals:	
Game Type:	
Core development (30%)	
Game scene (visual representation [2D, 2.5D or 3D], internal data structure):	
Game flow / game progression (e.g., navigation, screen scrolling, levels):	
Game interaction (e.g., action detection and response generation):	
Game object (e.g., use of sprite, 3D objects, animation, multimedia):	
Game mechanics (30%)	
Game rules / logics:	
Game challenges:	
Good use of game engine (15%)	
Choice (pyGame, Unity):	
User input (keyboard, mouse, joystick):	
Game object interaction (e.g., event triggering, collision detection):	
Incorporate multimedia content:	
Other features used (e.g., asset, incorporation of external libraries):	
Demonstrate creativity (15%)	
Game economy (e.g., support to game type, game feedback, game difficulty):	
Advanced Interaction (e.g., game physics, object tracking, steering behaviour):	
Game optimisation and configurability (50%) [For Level 4 Students Only]	
Include optimisation to enhance game performance (e.g., game related functions, game scene and objects, interaction, rendering, media content):	
Make the game flexible to support making changes (e.g., game scene and objects, game flow / progression):	