



Please read carefully

- This assignment sheet is to be returned back to the lecturer by the student with the completed work. Work handed in after the deadline date will be penalized.
- Students caught copying from other students or plagiarizing (copying from lecturers' notes, handouts, slides, internet, books or any other printed or digital media) will be disqualified and will get a REFERRAL for their assignment or a FAIL if it is the last resit.
- An assessor has the right to ask the student to attend an interview without prior notice if the assessor wishes to confirm that the work submitted has been clearly understood by the student.
- It is the students' responsibility to keep a copy of the assignment for revision.
- Students should not share assignment sheets between different classes.

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Programme	Higher National Diploma in Interactive Media Y2		Academic Year	2013/2014																																																																																																				
Assessor's Name	Gerard Said		Group/s	2HND2I																																																																																																				
Unit No	70	Unit Name	Computer Interface Design Principles																																																																																																					
Assignment No	1	Sit	First Sit	Type	Home																																																																																																			
Assignment Title	Creating an interactive application																																																																																																							
Issue Date		Deadline Date		Date returned to students																																																																																																				
Assignment IV	Mark Anthony Farrugia		Date	04 Apr 2014																																																																																																				
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Assessment Criteria Description	
Unit 70-CIDP : P1.1	Identify interactive media systems
Unit 70-CIDP : P1.2	Evaluate constraints affecting interface design
Unit 70-CIDP : P2.1	Evaluate potential of audio for an interactive interface project
Unit 70-CIDP : P2.2	Record sound for an interactive interface projec
Unit 70-CIDP : P3.1	Investigate the use of visual cues in interactive contexts
Unit 70-CIDP : P3.2	Develop screen design work for a personal interactive interface project
Unit 70-CIDP : P4.1	Conceptualise an interactive interface system
Unit 70-CIDP : P4.2	Use software to produce an interactive interface
Unit 70-CIDP : P4.3	Evaluate own interactive interface design work.
Unit 70-CIDP : M1.1	Identify and apply strategies to find appropriate solutions
Unit 70-CIDP : M2.1	Select/design and apply appropriate methods/techniques
Unit 70-CIDP : M3.1	Present and communicate appropriate findings
Unit 70-CIDP : D1.1	Use critical reflection to evaluate own work and justify valid conclusions
Unit 70-CIDP : D2.1	Take responsibility for managing and organising activities
Unit 70-CIDP : D3.1	Demonstrate convergent/lateral/creative thinking

COMPUTER INTERFACE DESIGN PRINCIPLES

This assignment covers the criteria as defined for the Computer Interface Design Principles module.

GENERAL GUIDELINES

You must follow the following instructions when submitting your assignment:

- This is a home assignment
- Fill in the assignment Cover Sheet and include it with your submission.
- Place all your work files and documentation in a folder using the following naming convention:
NAME_SURNAME_CLASS (2hnd1/2)
- Attach a CD of your submission to your printed submission, which should be bound in a flat file.
- Upload and include a link to **Github** containing all of your work.
- Answers should be properly organised and presented in a professional layout including proper section, task and question titling or numbering.
- Copying and Plagiarism are strictly prohibited and will be penalized through the College's disciplinary procedures.
- The documentation provided should be neatly bound.

GENERAL DESCRIPTION

You have been commissioned to create a game as part of a marketing campaign for your company. The game may have any theme you choose, however it must implement the following features:

- Player object with score
- Player must implement 3 actions
- 3 different GAME scenes with different background images
- A fully featured menu with a new game/exit button
- 3 Power ups
- 3 Weapons / player modifiers
- Functional screen boundaries based on a fixed square resolution of 800x600
- Enemies which could cause damage to the player in at least 2 different ways

TASK 1 – (P1.1)

Identify interactive media systems by answering the following question:

Which are the most important criteria when it comes to choosing a game engine?

List five criteria and justify your choice.

TASK 2 – (P1.2)

Evaluate constraints affecting interface design by completing the following task:

Show, with reference to your code, how you implemented fixed screen borders so that player objects could not leave the game scene.

For this task you need to write a short description and show one screenshot of the code that keeps the player on screen.

TASK 3 – (P2.1)

Show, with reference to your code, how you implemented a sound effect in your game.

For this task you will need to write a short description of how you implemented the sound effect and show one screenshot of the code that implements that sound effect.

TASK 4 – (P2.2)

Record and generate an effective sound for your game. To do this you need to present the following three .mp3 format sounds:

- The original sound recorded.
- A description of the effects applied to the sound.
- The final modified sound.

To achieve this task, please write a small reference to the folder where you put these files in your documentation under Task 4.

TASK 5 – (P3.1)

Explain how to change materials of different objects based on in-game events, with reference to the `OnTriggerEnter` and `OnTriggerExit` functions.

To achieve this task, include one screenshot of the game event which occurs when the material is changed (for example, when the laser hits the enemy and the enemy turns red), and include another screenshot showing the code that runs when this happens.

TASK 6 – (P3.2)

Draw a sketch of two screens of your game:

- Main menu
- Game screen

The sketches will show the positions of your GUI elements. You must include 2 sketches which may be built as simple wireframes in photoshop.

TASK 7 – (P4.1)

Conceptualize an interactive system by explaining the reason for the following 3 methods:

`Start()`, `Update()`, `OnTriggerEnter()`

To achieve this criterion you need to write a paragraph for each method describing the role of that method and when it is called. You must then explain, in that paragraph, at which point of the game such a method could be called for each of your prefabs.

TASK 8 – (P4.2)

Present your game. The game must implement the following functionalities:

- Player object with score
- Player must implement 3 actions
- 3 different GAME scenes with different background images
- A fully featured menu with a new game/exit button
- 3 Power ups
- 3 Weapons / player modifiers
- Functional screen boundaries based on a fixed square resolution of 800x600
- Enemies which could cause damage to the player in at least 2 different ways

Your game must be presented as an executable file. To achieve this task, please write a short paragraph on how to play the game, including a FULL keymap and include a note in your documentation explaining the location of the executable file.

TASK 9 – (P4.3)

Write a short paragraph explaining what improvements you would have implemented in the game if you had more time.

TASK 10 – (M1.1)

Show that complex problems with more than one variable have been explored in the context of presenting an interactive application by adding the following functionality to your game:

- Additional scene with boss challenge
- Additional 2 weapon types using alt keys

TASK 12 – (M3.1)

Use the appropriate structure and approach to creating appropriate visual cues in interactive contexts by adding animated explosions to the game.

TASK 13 – (M2.1)

Apply relevant theories and techniques to creating an interactive interface project by writing a short paragraph explaining specifically what genre of game you have created. Include references to similar games which have been created. Show similarities using 2 screenshots. (4 in total, 2 of your game, 2 of the game you used as a reference)

TASK 14 – (D1.1) -

Show that realistic improvements have been proposed against defined characteristics for success by explaining how you would update your game to reflect one of the finished titles you used as your inspiration in Task 13. What features are you missing and how would you go about implementing them?

To achieve this task, identify the missing features and implement them in your game.

TASK 15 – (D2.1)

Show activities have been managed by including a link to your Github page. All commits must be FULLY documented with the exact features that were implemented in that commit. The sequence of commits must CLEARLY show how the game was implemented over a realistic time span.

To achieve this task, include a link to the git project that you have been using as part of your project under this task heading.

You must have at least 8 fully documented commits with a realistic sequence of commit dates to achieve this criterion.

TASK 16 – (D3.1)

Demonstrate convergent/lateral/creative thinking by performing the following task:

Show how professional game development may be achieved by explaining how a professional team of different specialists would have worked on your game. Identify a list of job descriptions in the computer game development context and map them to specific parts of your game development.

To achieve this task, you must identify 4 different job titles and map them to 4 different elements in your game.