

# COMP706: COMPONENT ONE

## OVERVIEW

### DESIGN AND CREATE A GAME

<b>Weighting</b>	30% of Final Grade
<b>Learning Outcomes</b>	2, 3 and 4
<b>Date</b>	Refer to the Course Timetable for Assessment Due Dates
	<b>Part One: Initial Game Design, Due Week 4</b>
	<b>Part Two: Stand-Up Meetings, Due Week 6</b>
	<b>Part Three: Create a Game, Due Week 8</b>
<b>Your Task</b>	<ul style="list-style-type: none"> <li>• Complete an Initial Game Design Document</li> <li>• Create and implement a game to specification using Godot</li> <li>• Demonstrate the game and complete documentation</li> <li>• Refer to the section <b>Your Task</b> for further details</li> </ul>
<b>Deliverables</b>	<ul style="list-style-type: none"> <li>• There are <b>THREE</b> parts to the assignment               <ul style="list-style-type: none"> <li>○ <b>Part One: Initial Game Design</b></li> <li>○ <b>Part Two: Stand-Up Meetings (Video)</b></li> <li>○ <b>Part Three: Create a Game</b></li> </ul> </li> <li>• Refer to the section <b>Deliverables</b> for further details</li> </ul>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Read the Powerpoint on <b>Academic Miss-Conduct and Plagiarism</b></li> <li>• Revise over the assignment and be clear on what you need to submit</li> <li>• Download the necessary resources needed for the assignment</li> <li>• Assignments are to be submitted using Godot. Any work that is submitted that does not use the indicated resources shall not be marked</li> <li>• <b>Demonstrate the assignment</b> to the tutor during the 2 Hour Week Session</li> <li>• Submit any documentation as requested</li> </ul>
<b>Marking Schedule</b>	<ul style="list-style-type: none"> <li>• Refer to the section <b>Marking Schedule</b> for details</li> </ul>
<b>Submission</b>	<ul style="list-style-type: none"> <li>• As specified by the Tutor</li> <li>• Assignment <b>to be Demonstrated</b> to the tutor during class session</li> </ul>
<b>Summary</b>	Tasks relate to concepts and exercises covered in the lectures, laboratories and discussion questions

PART ONE: Initial Game Design	20 Marks
PART TWO: Stand-Up Meeting	10 Marks
PART THREE: Create a Game	70 Marks
Final Marks	100 Marks

## MARKING SCHEDULE (WORTH 30%)

ASSESSMENT	Design and Create a Game		
DUE DATE	Part I Due Week 4, Part II Due Week 6 and Part III Due Week 8		
ASSIGNMENT TYPE	Individual Assignment		
WEIGHTING	30% of Final Grade, out of 100 marks		
LEARNING OBJECTIVES	2, 3 and 4		
STUDENT NAME, ID		GAME	

Section	Available Marks	Student Marks
<b>PART ONE: INITIAL GAME DESIGN</b>		
• Game Design Document		
○ Story Line	3	
○ Main Character	3	
○ Overall Environment Design	3	
○ Level Detail Design	4	
○ Game Play	2	
○ Art, Sound and Music	2	
○ User Interface (HUD Design), Game Controls	3	
<b>SUB TOTAL</b>	<b>20</b>	
<b>PART TWO: STAND-UP MEETING AND DEMONSTRATION</b>		
• Presentation (Video Submission)		
○ Description of Initial Game, with storyboards	4	
○ Description of changes or modifications	2	
○ Demonstration of current game progress	4	
<b>SUB TOTAL</b>	<b>10</b>	
<b>PART THREE: CREATE A GAME</b>		
• Creation of Game (2 Levels)		
○ Creation of Game World and how it supports the game concept	10	
○ Player feedback and instructions to promote game storyline	5	
○ Use of game elements to promote game play according to theory	5	
○ Specific uses of Godot		
▪ Sprites, Animation	5	
▪ Parallax Background	5	
▪ Texture Maps	5	
▪ Collision Detection	5	
▪ HUD Design	5	
▪ Use of Instances/Inherited Scenes	5	
▪ Music/FX	5	
○ Sufficient usage of Additional Godot Features		
▪ Moving Platforms	5	
▪ Mob AI Logic	5	
▪ Portals, gates or any additional features	5	
<b>SUB TOTAL</b>	<b>70</b>	
<b>FINAL TOTAL</b>	<b>100</b>	

# COMPONENT ONE: DESIGN AND CREATE A GAME USING GODOT

## DESIGN AND CREATE A GAME USING GODOT

LO 2, 3 AND 4

### INTRODUCTION

The aim of assignment is to create a 2-level game using a development tool from a design brief. The game that you create will be embedded and become part of the class game. The class will decide on the type of game that will be created. You will be required to design, build and present your part of the game.

These skills are essential for game development. Understanding the target audience, platform requirements, performance issues and how those apply to Game Design are essential.

### CONCEPTUAL THINKING – THE IDEAL DEVELOPER

What makes an ideal game developer? It is the ability to develop games across multiple platforms while understanding the limitations of game design, game play and performance regarding each platform. What makes a great game developer is vision to understand how games perform on multiple platforms and designing a game to take advantages of those limitations while applying gaming concepts and theory. This assignment provides the necessary skills to design, engage, program and develop a game using Godot.

## PART ONE: INITIAL GAMES DESIGN DOCUMENT

LO 2, 3 AND 4

### DESCRIPTIONS AND DETAILS

Create a 2-Level game using Godot. The game is a 2D platform and would need to follow the specifications outlined by the design brief. Refer to the class game specifications on Moodle.

When you have decided on your game world then complete the descriptions on Moodle and produce a Game Design presentation

### GAME DESIGN PRESENTATION DOCUMENT

When you have your idea for the game you need to present your game design documentation as a presentation.

#### Design Document Presentation Outline

1. Storyline (theme)
2. Description of the Main Character
  - a. Character description
  - b. Character abilities
3. Drawings for Storyboard Scripting
  - a. Game Design Screen Navigation
  - b. Overall Game Play Design
  - c. Specific Level Design

4. Explanation of Art, Sound and Music
5. User Interface layout design (HUD)
6. Explanation of game controls with images

## PART TWO: STAND-UP MEETING

LO 2, 3 AND 4

### DESCRIPTIONS AND DETAILS

Design a presentation and report back on your game progress. You will need to:

1. Briefly overview your game design document
2. Recap your game using your Scripting and Storyboards
3. Explain any changes and modifications
4. Explain your current game progress (where you are at)

## PART THREE: CREATE A GAME

LO 2, 3 AND 4

### DESCRIPTIONS AND DETAILS

You must implement the game in Godot. You need to deliver the following:

1. A 2-Level game that will become part of the Class Game
2. How the game looks and relates to your game concept
  - a. Refer to your games philosophy and how it appears in the game implementation
  - b. Consider the ideas in your game storyline and how it appears in the game implementation
3. Game Implementation and Complexity
  - a. The amount of content imbedded in the game that supports game play, game design and storyline
4. Elements in game to promote game play
  - a. Implement gaming elements for game play
  - b. These vary depending on the type of game you have, however, they can include
    - i. Pick up objects
    - ii. Object completion or task completions
    - iii. Power up objects
    - iv. Moving platforms
    - v. Obstacles to avoid
    - vi. Puzzles to solve etc...
5. Applications of Cognitive Flow
  - a. Elements in game (refer to point 3) should promote cognitive flow
  - b. Refer to Barons Theory on Cognitive Flow for applying cognitive flow to gaming

## YOUR TASK

## CHECK LIST

Your task are as follows:

Task	Check List (☑)
1. Read the PowerPoint on Academic Miss-Conduct and Plagiarism	<input type="checkbox"/>
2. Familiarise yourself with the assignment, the due date, deliverables and what is required	<input type="checkbox"/>
3. Source the games idea, concept and resources	<input type="checkbox"/>
4. Complete sections of the Initial game design document to assist with game design and development. <b>Submit your Game Design Document to the Moodle link</b>	<input type="checkbox"/>
5. Create and Implement the game	<input type="checkbox"/>
6. Report back on the game progress in a Stand-Up Meeting video	<input type="checkbox"/>
7. <b>Demonstrate your game in the allocated time session</b> as indicated on the due date	<input type="checkbox"/>
8. Upload your game to the Moodle submission link.	<input type="checkbox"/>
9. Add your game to the class game project	<input type="checkbox"/>

## DELIVERABLES

## CHECK LIST

You must produce the following deliverables for Part Two:

Deliverable	Format	Check List (☑)
1. Submit Part 1 Game Design Document Presentation to the submission folder on Moodle	As a [PPT] or [PDF Document]	<input type="checkbox"/>
2. Submit Part 2 Stand-Up meeting as a video to the submission folder on Moodle	As a [MP4 video]	<input type="checkbox"/>
3. Demonstrate your game in the 2-hour tutorial session	As a [Demonstration]	
4. Submit an electronic copy of your game using the Moodle link	As a Zip file	<input type="checkbox"/>
5. Include your game in the class game project	As a Godot exe	<input type="checkbox"/>