

Games Development Group Design Document

Midterm assessment – 30% of the mark for this module

Overview

In this coursework assignment you will collaborate as a group to produce a detailed game design document. This games design document (GDD) will specify all the details of the game you are making for the final assessment - which will take place over several weeks during the latter half of this unit.

Use this opportunity to further establish a working relationship with your group, establish what your team and individual workflow will be, and *prototype your game as much as is possible* so you know it will be a good game. Remember, you can **NOT** know if your idea will be any good until you've prototyped it.

This GDD does *not* have to reflect what your team submitted for the Group Concept Document peer review exercise.

This is an important opportunity to ensure that your project is sufficiently challenging and interesting, well-scoped and can be finished to a good standard based on your skills and the time available.

It is strongly recommended you read the assignment brief for the final project before you begin this design document. It will have important information that will guide and inform your design decisions and scope.

Restrictions

Your game will adhere to the following criteria:

- Game Theme: City (Your game idea must be relevant and connected to the theme)
- Keyboard and/or mouse only.
- Single-player or local multi-player
- 5-10 minutes of gameplay.
- Easy to 'pick up and play', requires no lengthy reading to start playing.
- You must use Unity 2019.4 LTS
- Use audio-visual assets only (i.e. no code or game template assets. See 'Assets' section below).

The game can be 2D or 3D. Both paradigms have advantages and disadvantages, depending on what you want to achieve with your development.

Keyboard and/or mouse only.

Many of you may well use a controller to play your games and would like to take advantage of the possibilities it can offer - for example the use of twin analogue sticks.

However, not everyone owns a controller, and if they do then not everyone owns the *same* kind of controller. Moreover, no controller can be relied upon to work without problems across all formats.

To avoid unnecessary technical issues hampering your development of the actual game, the only control methods allowed are keyboard and/or mouse. No controllers, touch screen devices etc.

5-10 minutes of local gameplay

It is easy to over-scope at this point and plan to make a puzzle game with 100s of levels, an MMORPG, an online multiplayer game etc. These examples, and far more besides, are totally inappropriate for a parttime undergraduate project over 14 weeks or so.

It is always **far** better to produce a shorter, more polished game, than it is to produce a longer experience which is not as well crafted. For this reason the game will be of minimum 5 mins of interesting gameplay, but no longer than 10 minutes.

Your game can be single-player or local-multiplayer. You will **not** make a game which uses online multiplayer - online multi-player is relatively difficult to setup and it will make testing your game extremely difficult.

Do not fall into the trap of thinking that local multi-player versus games are easier because they may not need so many enemies to be made (i.e. the human is the enemy). In many ways they can be harder to design, balance and make interesting. They will also be far more difficult for you to test during this module, as it of course requires more people to be present during a gaming session. You should only attempt a multi-player game if you are confident that you will be able to test it properly.

Pick up and play

There should be a minimum of reading and/or explanation required to start playing. You only have 5-10 minutes of gameplay - make it count!

You may find games that were popular in the Arcade a good source of study for this aspect of the design. These games *had* to be easy to understand and play to encourage early engagement, but have depth and repeat playability to encourage long-term repeated engagement. They did this with very little or no reading required. Many used introductory animations to show what the player could do and the basic rules to get going.

In the same way, convey how to play your game using the absolute minimum of text, or no reading at all.

Assets

You may use audio and visual assets from the Unity Asset Store and other sources, but nothing that provides you with code or scripting for mechanics.

For example, some sprites/models with animation assets attached is entirely fine, but not a towerdefense game template project where you reuse many of the scripts in your game. These are fine to look at to see how to solve your problems, but not to use themselves.

This is a Computer Science degree, so all programming work must be your own. However, it's not an art, animation or sound design course, and so audio-visual assets only.

You must check that those assets are free to use for non-commercial purposes. Free in price does not always mean free to use as you wish - check the licensing information carefully for whatever you use, and plan to have a credits screen/section in your game where you can give credit for the asset being used.

Document

Use 10-12pt size font for normal text so that it is readable.

Hand in the document as a .pdf file only. Any other formats may not display or render properly on another machine.

It very much depends on your game as to how long the document is. However, please bear in mind the scope given above (5-10 minutes of gameplay). Detailed explanation of mechanics and how they will be used is welcome. Detailed exposition on a world, narrative and characters that will only be experienced for 5-10 minutes, not so much.

Suggested length of this document is a minimum of 7 pages, and a maximum of 15. Any pages beyond page 15 **WILL NOT BE MARKED**.

Suggested headings are given below. Some of these headings may be more appropriate to the game you want to make than others, and so they are not a strict template. However, you will want to ensure that your GDD still conveys the same type of information clearly, regardless of how it is structured.

Suggested Headings

Elevator Pitch

The one/two sentence top-level pitch for your game. This needs to have impact, convey the core ideas of your game, and make the listener interested in hearing more about it. [Summary](#)

A short paragraph (4-6 sentences) which further outlines what your game will be.

This is what you would offer up if your elevator pitch has captured someone's interest. These 4-6 sentences should be enough for someone to get a strong mental impression of how this game would look like and how it would feel to play.

Unique Selling Points (USPs)

What are the unique and interesting parts of your game?

What makes it different to other games already out there?

Why should someone be interested in playing your game over another in that genre?

The Team

Who is working on this game and what role is each person playing?

(This may well change throughout development, but you should start with a plan, even if it changes later).

Evidence of prototyping

Give details of prototypes you have made, how you have discussed them in the group, how they have been modified and how they have contributed towards the final design you present here in this document.

Include some screenshots/pictures of the prototyping process.

Key Mechanics

How does the player interact in the game?

What does the player do repeatedly?

What the mechanics that make this game stand out?

Characters and Settings

Who is the player character, and what are they doing?

Who are the enemies (if there are any)?

Where is the game set?

What is the backstory (be brief)? What is happening in the game?

What is the player trying to achieve?

Beginning the Game

How will the player learn how to play the game?

How will you teach the player the rules of your game?

Will you use a help screen? Video? Will you embed a tutorial in the first few seconds of the game?

First 2-5 minutes

A detailed walkthrough of the first 2-5 minutes of your game.

Exactly what will the player do?

What choices will they face?

What challenges are there, and how can they overcome them?

This needs to be detailed so you have a good idea of how much is involved in making your game. [Art](#)

Style

What does the game look like?

You are advised to keep things simple here, given the time that you will have for this project.

Use pictures to illustrate what your game might look like. These can be screenshots from other games or pictures of other sources e.g. art/film/animation etc. Write about what sources will influence the art style.

You do not need to include a picture for every asset in your game. This may well change and evolve over the course of development and not be 100% decided as yet. Include as much as is need to make the art style clear. [Audio](#)

Similar to the art, name your influences and create an idea of how the game will sound.

SWOT Analysis

(SWOT = Strengths, Weakness, Opportunities, Threats)

- What are the good points about your game?
- What kinds of problems do you foresee with this design/project? How are you going to overcome them?
- Any unforeseen problems that could occur? How will you deal with those if they arise?

Production Schedule

Use a simple spreadsheet/table to show the weeks countdown to the hand-in date, and what each member of the group plans to be doing each week.

This is unlikely to stay as is, so don't worry on being overly accurate at this stage. However, this is here to ensure you have thought about how much time you have, what you need to get done, and to help you develop a good game and get a good grade in the final assessment.

Remember to:

- Build in some downtime in case something goes wrong, takes longer than expected, or you just need to rest for a time from development.
- Any holiday time that the members of the group are planning on taking.
- Plan for the feedback points that are built into the course for you, as well as any other feedback opportunities you may wish to create for yourself. [List of all assets](#)

You **must include a list of every asset you plan to create/use for the game.**

You may wish to use a table to do this. Doing this will help you determine if your game's scope is appropriate and adapt accordingly.

You will need to consider including:

- Every art asset (sprite/model/textures etc.), animation and visual effect for each character/object in your game. This includes any non-game world elements such as menus, user interface, stats display etc.
- All music and audio assets. This includes all menu and user interface sounds in addition to sounds from 'in-game'.
- All levels/game areas you plan to build. Do they look different? Do you need to add more to the audio-visual lists?
- Every single system you need to program.
 - All the movement for the player and for any non-player characters and/or enemies that occur.
 - Every mechanic, and every object those mechanics need to work with.
 - Every game system (e.g. camera, user interface, music system, tracking of data etc.).
- The relative importance of each asset. Which ones are fundamental to your game working? Which ones are 'nice to have', but not essential?

Note that this is NOT a commitment to using all, or indeed any, of these assets.

The process of making a game should be *iterative*. You will find yourself needing to change requirements, add assets to your list, drop features and assets etc. The purpose of this section is to make you aware of the scope of what you are intending to make, so as to plan your time and resources effectively.

The *last* thing you want to happen is that you spent time and energy creating assets for features, levels, characters etc. that eventually had to be dropped and left-unused due to time constraints! This can be avoided by realising the true scale of your task from the beginning, and planning accordingly – even if it *will* change along the way.

Mark Scheme

Area	Criteria	Marks
Description of Game	No summary or elevator pitch. No explanation of setting, player identity or goals, or features given.	0
	Some attempt to provide high level summary of game. Vague mention of setting/background of game and player identity/role. No real attempt at explaining why someone would want to play this game.	1
	Elevator pitch and summary present. Premise of game given and role of player made clear. Core features of game identified.	2
	Strong elevator pitch and well-written summary that generates interest. Premise/setting of the game and the role of the player is clear. Core features of the game are identified and its made clear why someone should play this game.	3
	Powerful elevator pitch and summary that excites and/or inspires. Premise of game and role of player is clear and sounds engaging and interesting. Core features are clear and genuinely unique selling points.	4
Prototyping	No evidence or mention of prototyping.	0
	Some mention of prototyping and what was learned, but without evidence.	1
	Evidence of prototyping provided, with some description of the process.	2
	Evidence of multiple rounds of prototyping, with anecdotes on what was learned at each stage.	3
	Evidence of several rounds of prototyping, with detailed observations of what was learned at each stage and how this affected subsequent iterations of prototypes.	4
Design	Mechanics are not described.	0
	Not all design requirements adhered to, some mechanics vaguely described. There is lack of clarity over how the game would actually play and what the player would be doing.	1
	Design requirements met. Mechanics described. What the player is doing in the game is clear.	2
	Design requirements met. Mechanics described with examples to show how they are used and how they work together. Support from diagrams where necessary.	3
	Design requirements met. Novel mechanics, used with elegance and sophistication, are clearly described with well-chosen examples, supported with diagrams where appropriate. It is very clear what the player will be doing, and what kinds of decisions they will need to make during gameplay.	4
Audio-visual	No section on audio or visuals of game.	0
	Brief and unclear sections on art and/or sounds.	1
	Art style and sound/music for game is present and names references and images.	2

	Art style and sound/music for game is laid out in detail with images and references and makes intended style very clear.	3
	Art style and sound/music for game is laid out in detail with images and references to create a clear, distinctive, novel and interesting art style.	4
First 5 minutes	No mention of how the player will learn how to play the game. No account of the first minutes of gameplay.	0
	Large amount of text to be used to explain how to play game. Brief/incomplete/confusing account of the player's first few minutes.	1
	Tutorial/player instruction made clear using brief written instructions. Description of player experience during first few minutes of gameplay.	2
	Tutorial/player instruction is made very clear using diagrams and/or <i>minimal</i> written instructions. Detailed and very clear account of first 2-5 minutes of gameplay.	3
	Tutorial/player instruction is made very clear entirely through game play. Detailed and very clear account of first 2-5 minutes of gameplay.	4
Asset list	No list of assets to be used/created included.	0
	Vague and incomplete list of assets with no indication of priority or how long asset production may take.	1
	Good list of assets with some indication of priority given along with how long it might take to produce.	2
	Full and detailed list of all assets: audio, visual, levels, areas, features, systems, code etc. with a priority rating attached to each (i.e. essential to game, very important, 'nice to have', optional etc.). A discussion of the scope of the asset list is present.	3
	Full and detailed list of all assets: audio, visual, levels, areas, features, systems, code etc. with a realistic time estimate of how long it may take to create each, and a priority rating attached to each. Asset list is realistic and makes it clear this project is achievable within the time given for this course.	4
Production	No plan of how the game will be made. No awareness of potential issues.	0
	Vague plan of production given, but team roles/workload not made clear, and plan is unrealistic.	1
	Production schedule for each team member given, and some awareness of potential issues during production accounted for.	2
	Realistic schedule for each team member in place. SWOT analysis present.	3
	Detailed and realistic schedule for each team member in place. Realistic and comprehensive SWOT analysis included and related to production schedule.	4
Structure and writing	Document is rambling, unstructured and incoherent. Requirements for text size and suggested length ignored, team not mentioned.	0
	Team members are named and given roles. Formatting requirements met, but document is poorly structured and difficult to follow.	1

	Team members named, writing requirements met, document adequately structured and writing style sufficiently clear. Uses diagrams in some places to support more complex sections.	2
	Well structured, requirements and team inclusion satisfied, well-written and easy to follow. Good use of diagrams etc. to support writing.	3
	Exceptionally well-crafted and well written. Energetic and clear writing conveys details of design efficiently, with no word left feeling extraneous. Excellent use of graphical elements to support documentation.	4

Maximum marks possible = 32 marks.