

# Design A Game 2022

## Appendix 1: What is a Synopsis?

You should have an idea of a simple “game mechanic” that you like by now. (Eg. Fun fast paced platformer games). However, there is more than one way to make any game!

Take the fun fast paced platformer idea- this could be Mario world with a plumber who avoids turtles and jumps down tubes to alternate realities or Sonic who is a high speed hedgehog who collects rings and defeats bosses at the end of the level.

Both those sentences were examples of a really short and simple game **synopsis** or summary.

Notice that they are starting to get more specific? A good synopsis includes:

- Theme - what the genre and game style
- Character - who do we play this game as?
- Objective - what is the main goal or goals of the game?
- Challenge - what stops us achieving the goal(s) or makes it difficult to achieve?
- Setting - where is it set and what might it look like?

## Generate some ideas

Put your [brainstorms](#) or sketches here

A top down bullet hell shooter with bosses

A tower defense where you can make your own path

A 2d pixel platformer


Write a [synopsis](#) for each of your three ideas:

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<b>Synopsis 1</b>	Theme: ,top down shooters,light pixel, coloured.Character: unknown yet,Objective:defeat the final boss,Challenge: other enemies and bullets,maybe bullet hell,setting:unknown yet
<b>Synopsis 2</b>	Theme: 2d platformer, coloured,Character:unknown yet,Objective:get to the end goal,Challenge: obstacle and enemies,setting: unknown yet
<b>Synopsis 3</b>	Theme: pixel art tower defense,character:plants,objective:survive a wave of enemies,Challenge:enemy try to kill you,Setting:forest

1: a top down shooting game where you need to attack the enemy while trying to dodge the enemies bullet,there would be a few stages and boss fights,

2:a 2d platformer where you need to reach the end goal, but don't fall off!,there could be more mechanics like traps, spikes, enemies, hidden levels,

3:a pixel tower defense where you defend the end goal and you make your own path(maybe),enemie attempt to reach the end goal and you need to stop them

## Narrow it down

Complete the following sections after completing the class activities. Make sure you understand what "resources", "scope", "target audience", "existing outcomes" and "evaluate" mean and how to give and receive good quality feedback.

## Summary of Feedback

F "That's kinda cool"

"What do you think is good or bad about them?"

F "All of them are nice challenges,are there a time limit on anything?"

"You need to defeat all enemy in the shooter game before the time runs out"

" I like the idea of tower defense, the idea of being able to make your own path,so how much stuff is going to be in the tower defense?"

"At Least 10 different towers and 5 unique enemies,"

"How can you strategise being able to make your own path?"

"For example, some tower might attack horizontally in a straight line,so you can make a straightforward path so it can attack a line of enemy at once"

"Are there going to be some typical boss fights?"

"Yes, typical every 5 waves"

"Why would the player want to collect coins?"

"They could use it to buy power ups like to run faster, jump higher, extra lives, etc"

"How long would these buffs last for?"

"Some could be a 1 level thing, some could be permanent,""

Feedback:because the a key to attack can be a bit awkward, i think tis better to change attack key to space, change how time affects score and attack level ups because if survived time affect score and score affects attack power there would not be much a point for score, thing such as conflict between life and score, and maybe lower the amount of different bullet size and shape

Game Idea	Summary of Feedback (remember because!!)
Idea #1	" I like the idea of tower defense, the idea of being able to make your own path,so how much stuff is going to be in the tower defense?"

	<p>"At Least 10 different towers and 5 unique enemies,"</p> <p>"How can you strategise being able to make your own path?"</p> <p>"For example, some tower might attack horizontally in a straight line,so you can make a straightforward path so it can attack a line of enemy at once"</p> <p>"Are there going to be some typical boss fights?"</p> <p>"Yes, typically every 5 waves"</p>
<b>Idea #2</b>	<p>"Why would the player want to collect coins?"</p> <p>"They could use it to buy power ups like to run faster, jump higher, extra lives, etc"</p> <p>"How long would these buffs last for?"</p> <p>"Some could be a 1 level thing, some could be permanent,""</p>
<b>Idea #3</b>	<p>Feedback:because the a key to attack can be a bit awkward, i think its better to change attack key to space, change how time affects score and attack level ups because if survived time affect score and score affects attack power there would not be much a point for score, thing such as conflict between life and score, and maybe lower the amount of different bullet size and shape</p>

## Pros and Cons

Which game would be easier to make? Platformer or shooter

How hard will the art be to make/find?

Can I find tutorials to make this kind of game?

Which one do I think I will enjoy making more? Shooter or tower defense

	Pros	Cons
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<b>Idea #1td</b>	Easy to find/make art Enjoyable to make	Difficult to make
<b>Idea #2p</b>	Easy to make Easy to find/make art	I already made a platformer game last year,i want to make something different
<b>Idea #3s</b>	Easy to make Enjoyable to make Apparently is a popular genre	Difficult to find/make art

## Research and Evaluate

<p>What idea are you going to pick and why? Include existing outcomes, scope, target audience, resources etc. (100 words approx and use because!)</p>
<p>Tower defense ideA: Some existing outcomes other made:<a href="https://www.newgrounds.com/portal/view/593976">https://www.newgrounds.com/portal/view/593976</a> Scope:predefined,5 wave Target audience:people who like tower defense Resources:</p> <p>Platformer idea(most likely eliminated): Some Existing outcomes: super mario, Scope:predefined,3 level Target audience: people who likes to play semi pixelated platformers Resources:</p>

Shooter game idea:

Some existing outcomes: some really old cardio games.JSAB,cuphead,vampire survivors Touhou project, many other

Scope:predefined, 1 or 2 level,

Target audience:

Resource:

I think i will pick the tower defense idea because i'm interested in tower defense games,there is plenty of existing outcomes,there would not be that many waves of enemy paired with simple art style because we don't have much time, the target audience would be people who like tower defense games,

I think i will pick the shooter game idea,because apparently the genre is popular,it will have 1 or 2 level with simple art style because of limited production time,the target audience would be people who likes shooter game, it would be

List your sources: Add links to websites or articles that helped you decide here:

1. <https://www.statista.com/statistics/1263585/top-video-game-genres-worldwide-by-age/>
2. [https://en.wikipedia.org/wiki/Shoot\\_%27em\\_up#Bullet\\_hell](https://en.wikipedia.org/wiki/Shoot_%27em_up#Bullet_hell)
- 3.
- 4.
- 5.

Tower defense is barely mentions on moist of the websites i find,

## Relevant Implications

In your own words, describe at least 3 relevant implications that are important to consider before designing any video game. Complete the class activities on how to answer and the HCI lesson before completing this.

Relevant Implication	What is it and why is it important to consider when making games? State, Explain, eXample, whY
Aesthetics	How the game looks like, sounds like, Its thing such as graphics, background music, sound effects, animations, it's important to have a good and consistent graphic style and quality to keep the interest of players Examples would be if your character in a game in pixel art, your entire game would preferably be pixel art or it would look out of place

	<div> </div> <p>For example: this is fine</p> <div> </div> <p>this is not</p>
<p>Functionality</p>	<p>How well does the game work, does it crash, does it malfunction It's the lack of bugs and glitches that affect the game for example, you don't want your character to suddenly become unintentionally invulnerable by wearing a garbage can on your head, because that would make it a bug and doesn't function well</p>
<p>Usability</p>	<p>It's how easy it is to use and control It's important because if it's not easy to use your player will have a bad experience playing the game, a example of a commonly seen usability control is wasd or arrows,</p>

	<p>Theme: ,top down shooters,light pixel, coloured.Character: unknown yet,Objective:defeat the final boss,Challenge: other enemies and bullets,maybe bullet hell,setting:unknown yet</p>
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# Game Design Document

<b>Title:</b>
<b>Genre:</b> top down shooter
<b>Target Audience:</b> people who likes bullet hell top down shooter games

<b>Synopsis</b>
<p>Shooter game idea: Some existing outcomes: some really old cardio games. Touhou project,cuphead, vampire survivor many other Scope:predefined, 1 or 2 level,player movement, player shooting, bullets movement,enemy movement, enemy shooting, enemy bullet movement,music,sound effects,enemie hp counter, player lives counter,enemy item drop,player item pickup,score,death, Target audience: people who likes bullet hell top down shooter games Resource:godot,gimp,inkscape,myself,feedbacks,</p>

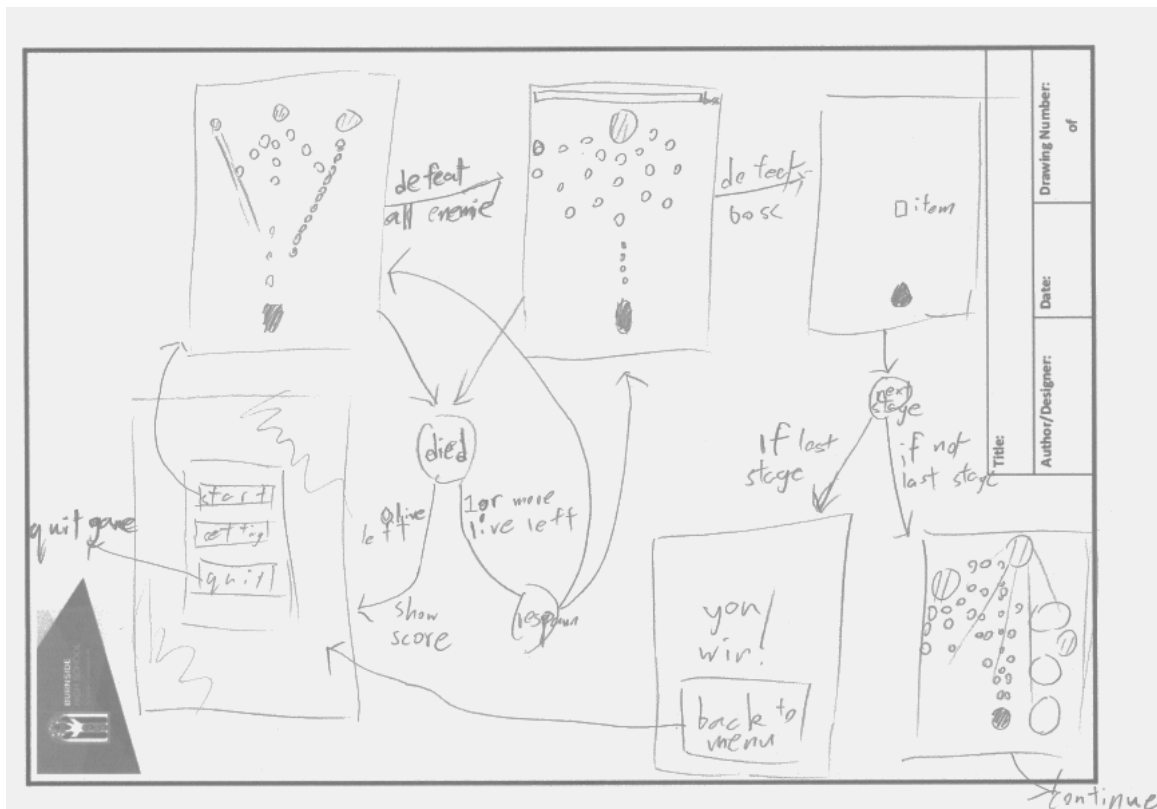
<b>Game Objectives</b>
<p>Defeating the final boss, enemy try to stop you by attacking you</p>

<b>Game Rules</b>
<p>Win-defeating a boss of a level, Lose-dying and losing all your lives Dying-getting hit by bullet</p>

You upgrade your own attack by collecting points, points also contribute to score, score is also determined by how long you survive for

## Game Structure

Levels/scenes/time etc. A Game Flow diagram.



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<b>Game Controls</b>
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Instruction of how you intend to have the game controlled on the intended platform- keyboard/mouse and details. A diagram is required keyboard, Arrow key to move, <del>a to shoot</del> space to shoot (by suggestion). hold shift to slow down, p to pause, z to select and x to cancel
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<b>Game Camera</b>
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2d, top down,
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<b>User Interface</b>
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Exit, continue, pause, unpause, volume,
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<b>Player</b>
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Information about the intended player: character, look, behavior, movement etc. Drawings are required
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<b>Art</b>
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Setting/level design- include rough sketches of what you intend it to look like. Drawings are required.
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Title:

Author/Designer:

Date:

Drawing Number:  
of

Shant...

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<b>Audio</b>
Different music for each stage, different boss music, death sound effect, bullet sound effect, enemy death sound effect,boss defeat sound effect, game over sound effect, button sound

<b>Requirements</b> Requirements are what must the game contain to be considered successful, what is the theme,challenge and goals in broad terms. There should be at least 5 key requirements.	<b>Specifications</b> Specifications are a list of technical and measurable things that the game “will have” or “will be” in order to achieve the requirements. Note that there should be several specifications for every requirement.
Must be a top down 2d game	Will be 2d top down shooter game Will be Made using godot Will be full screen
Must have music	Will have music, will have bgm, will have sound effect when enemy die, will have sound effect when player die, will have sound effect when boss die, will have sound effect when player win, will have sound effect when player fire bullet,
Must have at least 1 level and 1 boss	will have enemies that shoots bullets at players, When boss hp reaches a certain point it will change attack patterns
Must be easy to control	Will use Arrow key to move, will use A to shoot, will use shift to slow down,will use up to pause
Must be challenging to beat	Will have multiple(atleast 5) type of enemies Will have Unique boss attacks, Will be Difficult to dodge

Must be winnable	Player will Win when boss hp reaches 0
Must be loseable	Player will Lose when player live reaches 0

From top to down:

(left)

Mechanic:

Shooting

Pressing a causes character to fire projectile,collecting enough points make attacks stronger

Lives

Getting hit by enemy projectile causes lives to decrease by 1 and respawn character,if lives fall below zero, game over

Levels

As player progress through the levels the attacks are harder to dodge,the boss of a level need to be defeated to progress

(right)

Settings

Volume,SE,music,display hitbox, etc

Game

A wave of projectile fired randomly

Aimed projectile

Projectile can have different sizes and hitbox

Player

character

ooting

Pressing a causes  
character to fire  
projectiles, collecting  
enough points with  
attack stronger

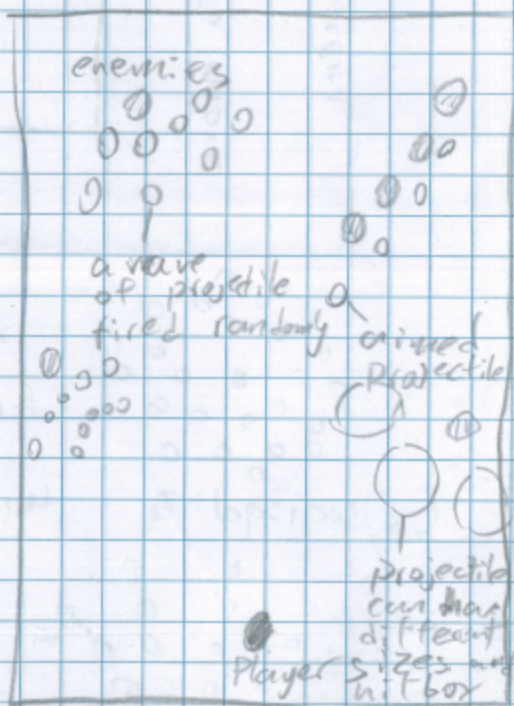
settings

volume, SE music  
display hitbox, etc

game

getting hit by  
enemy projectile  
causes lives to  
decrease by 1  
could respawn  
characters if  
lives fall below  
zero game ends

as player progress  
through the levels  
the attacks are  
harder to dodge  
the boss of a level  
need to be defeated  
to progress



From top to down, right to left:  
Some sort of background image  
Title  
Start  
Setting



Quit  
controls  
Arrow key to move  
A to shoot  
M to open menu  
Game menu

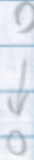
Caved  
Laser  
Explosion  
Explosion (3)  
Single  
Line  
Spread (3)  
Spread (4)  
Possible bullet patterns  
Shooter

Shooter

possible

bullets patterns

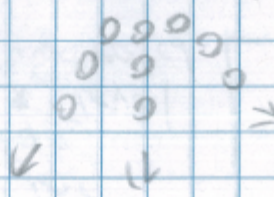
single



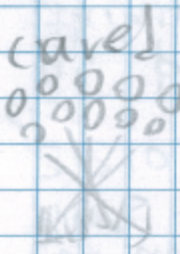
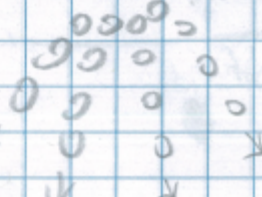
line



spread(3)



spread(4)



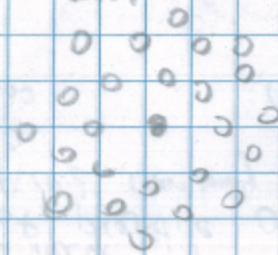
laser



explosion



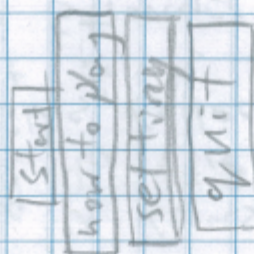
explosion(



game menu

some sort of  
background image

title



controls

arrow key to move  
a to shoot  
m to open menu



BURNSIDE  
HIGH SCHOOL

bullet size

○  
small

○  
medium

○  
large

□  
cube

△  
triangle

▽  
spike

◇  
kite

droplet  
○

star  
☆

laser  
/

attack upgrades

lv

1

2

3

4

5



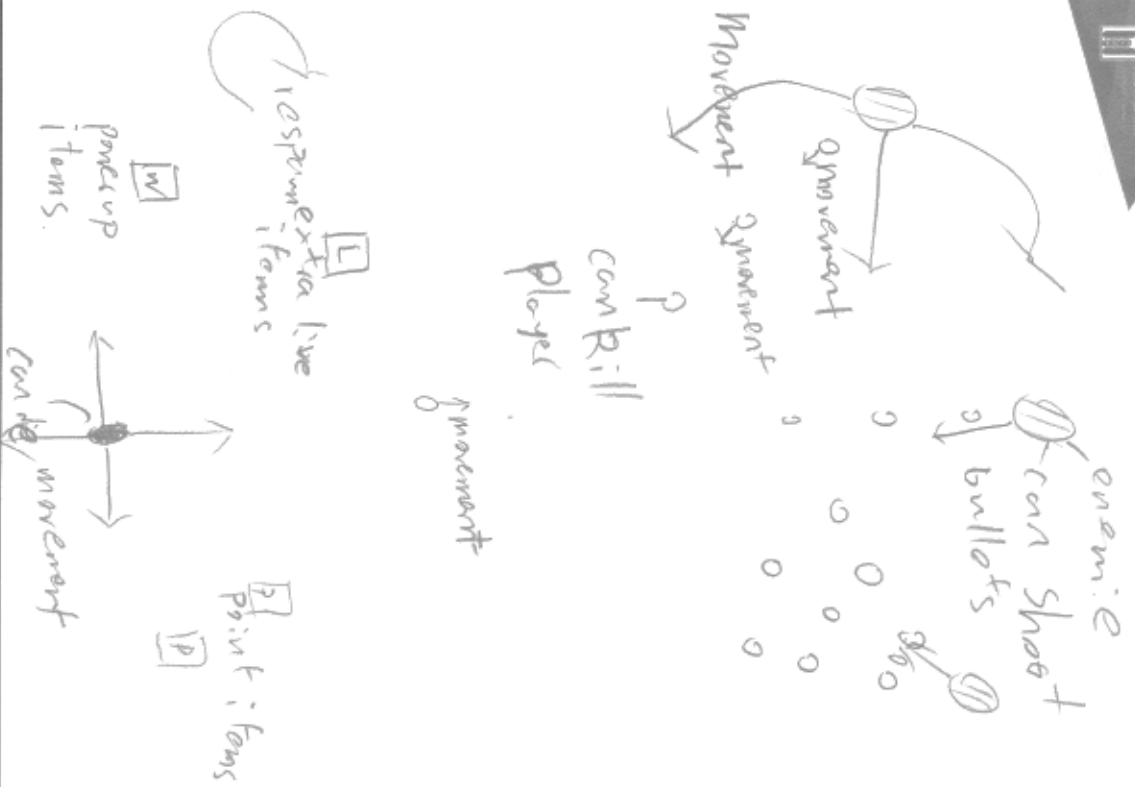
Title:

Author/Designer:

Date:

Drawing Number:

of



Points xxx  
hs xxxxx  
lives 111  
Powerup xxx

Title:		
Author/Designer:	Date: (DD/MM/YYYY)	Drawing Number:
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## Resources

What do you HAVE to make this game, what people, what skills do they have, how much time, what software, hardware etc. This helps you to judge if a game is in scope (ie do-able with the given resources)

Write a bullet point list of all your resources

- godot
- gimp
- inkscape
- Inkscape skills, gimp skills, coding skills in godot and python,
- friends
- family
- feedback
- support
- ~10 weeks
- Around 8gb to 16 gb memory

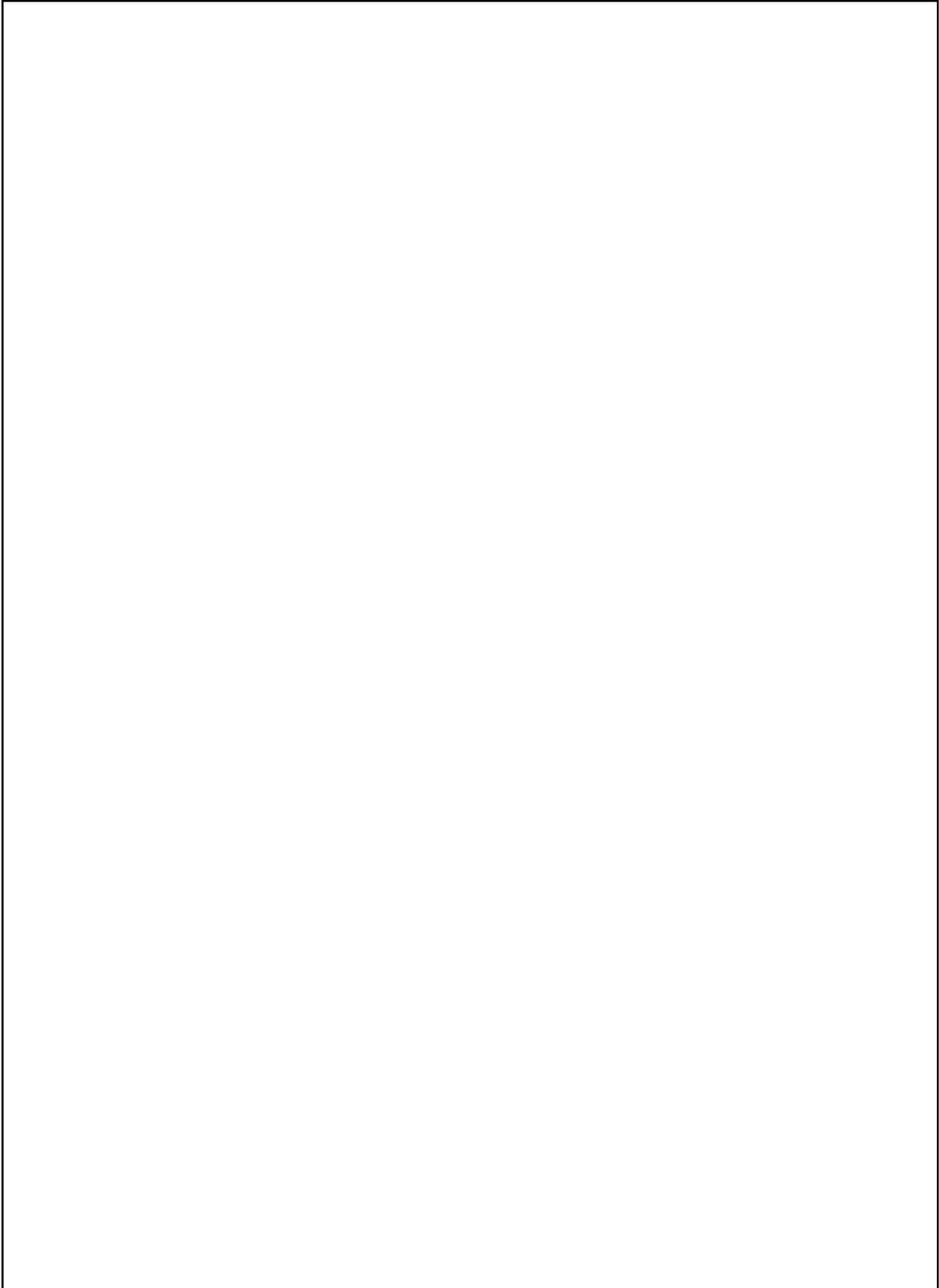
## Evaluate your Design

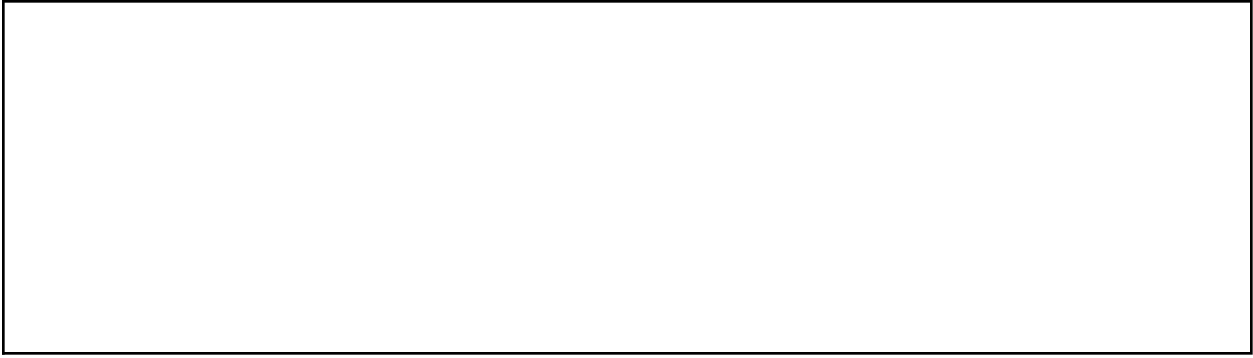
Justify, with evidence why this design is going to be awesome. Does it fit the theme? How does it meet the relevant implications? How will it meet the needs of the target audience?

Don't forget to include research to back up your claims. Use the internet and add a bibliography of websites or articles that you used. The better you do this section, the better the mark you will get.

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I'm going to make a bullet hell game because its a popular genre, this is proven by the large amount of bullet hell games that is still being produced, and by also the large player base those games have, a example would be vampire survivor, vampire survivor have had 33308 player on average during the last month have have sold at least 2.5 million copies,another example could be the binding of issac, wil more than 3 million sales in 2014 and 5 million in 2015. and the artstyle will be simple unless i want to make it more complex because it's easy to make, the target audience will be people who likes bullet hell games because, the control will be both hand on keyboard controlling movement and shooting because it's easier to make and arrow key movement are more challenging to complete than using a mouse, some existing outcome/similar games are just shapes and beat, cuphead, vampire survivor,s touhou project, many other







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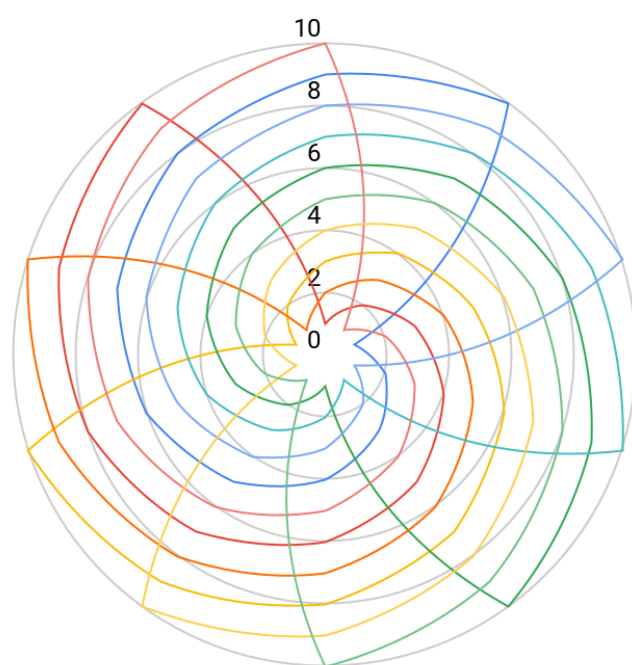
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## Marking Schedule

Achieved Develop a proposal	Achieved Develop a design	It could look like.....
	Provide evidence of research and generated a range of design ideas	Research into what you could make. Using the theme and coming up with a few potential games that fit the theme somehow Research into how to do 'stuff' video links, sources, existing outcomes.
	Describe the relevant social implications and end user considerations	Include consideration of relevant implications before development
The proposal includes an outcome statement which contains the problem/issue, scope, purpose and context. The proposal identifies the end user The proposal includes a list of requirements (must do...must be....must have) The proposal includes a list of Specification (technical, measurable) The proposal identifies a list of resources required	Define the purpose of the outcome and the end users	A Game Design Document (this contains the Proposal too! Requirements, specs,resources, target audience, issue(s), scope,purpose, context)
	Describe the appropriateness of the chosen design	Evaluation of your chosen proposal and design
Merit Develop an informed proposal	Merit Develop an informed design	
The proposal has been informed by feedback and research	Use feedback to improve the design	Several pieces of high quality feedback informing proposal and design
The proposal shows clear links between the requirements, specification, end users and required resources.	Explain how the design meets the relevant social implications and end user considerations	High Quality evaluation (from A criteria)
Excellence Develop an effective proposal	Excellence Develop an effective design	
The proposal includes justification, with evidence, of how it will meet the overall project requirements.	Includes justification, with evidence, of how the chosen design is suitable for the purpose and the end users.	Evaluation contains justifications with evidence of how it fits the project goals/theme/scope etc.
Mark for Proposal	Mark for Design	Comments
Achieved	Achieved	You really need to have a look at your final evaluation as this is worth a lot better mark if you finish that bit



- B
- R
- Y
- G
- O
- C
- L
- P
- S
- M