

# Design A Game 2022

## Generate some ideas

Put your [brainstorms](#) or sketches here

Top Down 2D Shooter Game

2D Racing Game

Platformer game 2D parkour

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

<b>Synopsis 1</b>	You play as a tank to destroy all the enemy bases and enemies because if you can't, the world will be at risk from a giant laser beam a factory is producing. Your objective in each level is to stay alive and kill all the enemies and destroy the base which will give you coins so you can purchase power-ups.
<b>Synopsis 2</b>	You are playing a top-down racing game and trying to beat the other car so you can pass the level. The other car will try to always overtake you so you must never make mistakes.
<b>Synopsis 3</b>	Game style similar to Vector (mobile game). You are a person getting chased by the police after stealing money from the bank. The police are chasing you on the rooftops of the city so you must do lots of different tricks to get past the obstacles. Once you complete the level by getting on your getaway car you earn money so you can purchase speed boost abilities and other.

## 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

Game Idea	Summary of Feedback (remember because!!)
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<b>Idea #1</b>	There should be different “biomes” for different levels and stages. There should be a boss in every final “stage” to make the game more entertaining. Another feedback I received was having an over heat system because some people just like holding down the shoot key which makes the game too easy so having an over heat system will make players use their weapons more efficiently. Add a time limit so the player can’t take their time which makes the game more crazy and entertaining. The final feedback I received was adding power ups on the ground for the player to collect because it makes the game entertaining.
<b>Idea #2</b>	Creating more difficulties for the racing game so the player won't easily get bored of the game. Another idea was having powerups on the race track because it makes the game more exhilarating and the race will be very unpredictable to win.
<b>Idea #3</b>	Adding an endless mode for the player because they can practice playing the game without playing easier levels. Another idea was adding another gamemode which is playing as police because you can have more things to do instead of running away.

## Pros and Cons

	<b>Pros</b>	<b>Cons</b>
<b>Idea #1</b>	Interesting game with cool abilities and different tank weapons. Different bosses will make the game unique because there could be a story behind it	Programming Ai enemy tanks will be rather difficult and long to make because you need to program their movement and the way they shoot.
<b>Idea #2</b>	A competitive game against AI could be entertaining because I am planning on making this an offline game so you can play it anywhere.	Can get boring very easily (repetitive) because the objective is the same which is trying to beat the AI racer.
<b>Idea #3</b>	A unique styled 2d platformer game because most platform games require you to move forwards but this game you have to control how to jump and do tricks.	A weakness for this would be AI because there has to be an AI chasing you and you have to program the AI's sequence for each level.

## Research and Evaluate

What idea are you going to pick and why?  
Include existing outcomes, scope, target audience, resources etc.  
(100 words approx and use because!)

I am going to pick the first idea because it is more creative than the other ideas I have and it will be more entertaining to play than the other ideas. The game that inspired me to make this is Awesome tanks because I used to play that game a long time ago and want to create another version or better version of it. I am creating Ai in this game because you have to have an opponent to fight without having a sequence for them because it wouldn't work 100% of the time. The audience I am aiming for is younger people because they most likely like tanks or enjoy playing video games. I will try to make graphics settings so any computer can run the game without having lag issues.

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

1. [Creating Ai](#)
2. [Top down shooter](#)
3. [Awesome tanks \(inspired from this game\)](#)
- 4.
- 5.

## 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	Aesthetics are aspects of a game that are represented in art forms. Aesthetics are important because they are the game's first impressions when a new player opens the game. For example, if you played a platformer game but the player's animation doesn't look good, it could ruin the first impression of someone playing the game.
Functionality	Functionality is how the game works. It is important to have good functionality because the game wouldn't be fun because the mechanics in the game aren't fun. Eg if crafting didn't work in minecraft it would not serve its purpose.
Usability	Usability is how to play the game with the controls. Usability is important because if you couldn't play a game properly then it wouldn't be a fun experience because you would feel frustrated if eg. your player can't move properly. This is why usability is very important when making games.

# Game Design Document

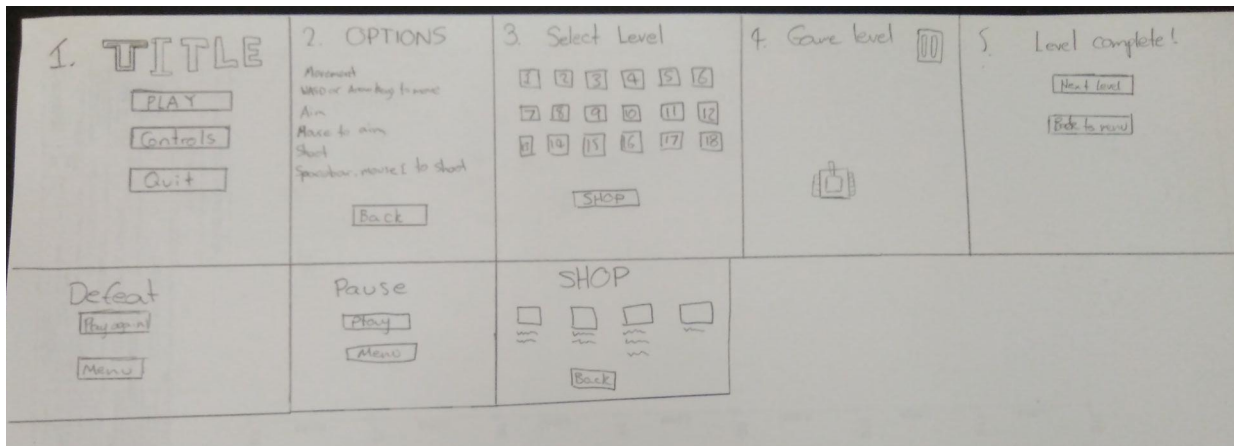
<b>Title:</b> Powerful Tanks
<b>Genre:</b> Top-Down shooting game
<b>Target Audience:</b> Younger players, teenagers and beginners

<b>Synopsis</b>
You play as a tank to destroy all the enemy bases and enemies because if you can't, the world will be at risk from a giant laser beam a factory is producing. Your objective in each level is to stay alive and kill all the enemies and destroy the base which will give you coins so you can purchase power-ups.

<b>Game Objectives</b>
The player has to destroy all enemies and their base to win. The enemy stops the player by shooting at it.

<b>Game Rules</b>
<p>All the game rules- win/lose/scoring</p> <ul style="list-style-type: none"><li>• To win you must destroy the enemy base and all the enemies eg: tanks, soldiers and aircraft</li><li>• To lose the player will die if the player doesn't complete the level under the time limit or get killed by the enemies. Another way for the player to die is if the player shoots an explosive barrel right next to the player, the player will take explosion damage which could kill the player.</li><li>• Everytime you destroy a block you will get one point. There are different types of blocks eg: explosive barrels will give you more points. Destroying enemies and bases will give you points and at the end of each game the score you get will be converted to coins.</li></ul>

<b>Game Structure</b>
Levels/scenes/time etc. A Game Flow diagram.



1. Main menu
2. Options
3. Level select
4. The game
5. Level complete scene
6. Defeat scene
7. Pause scene
8. Shop scene

## Game Controls

Instruction of how you intend to have the game controlled on the intended platform- keyboard/mouse and details. A diagram is required

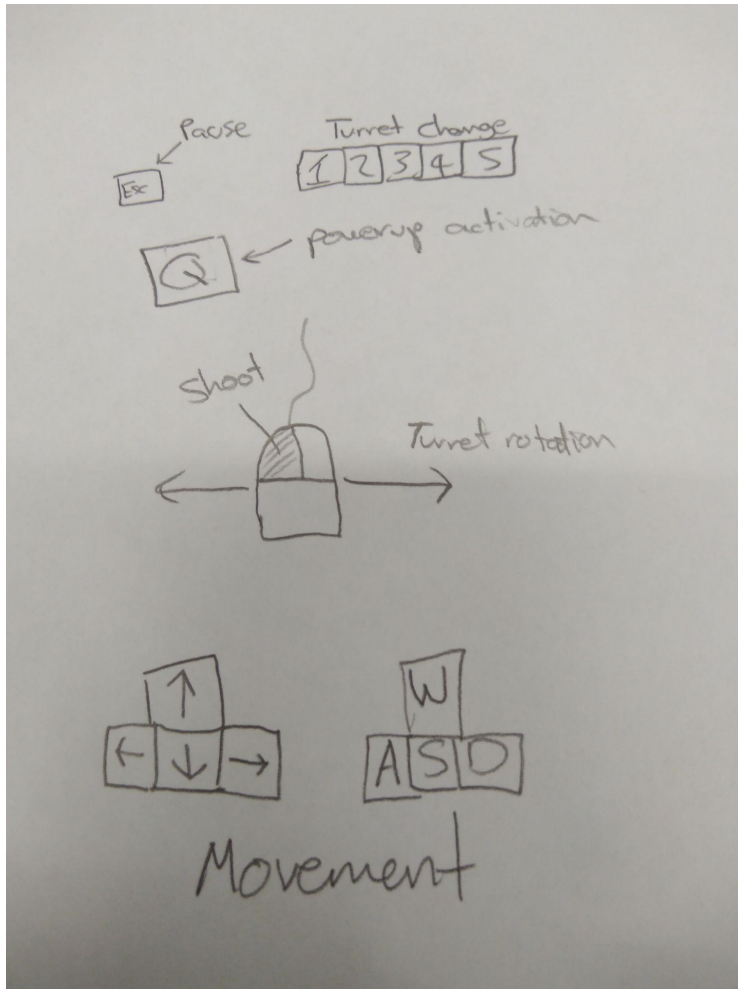
I intend the game to be controlled using arrow keys and WASD to move the tank and mouse to aim the tank turret.

Esc key to pause the game in case the player needs to take a break.

Mouse1 to shoot the turret

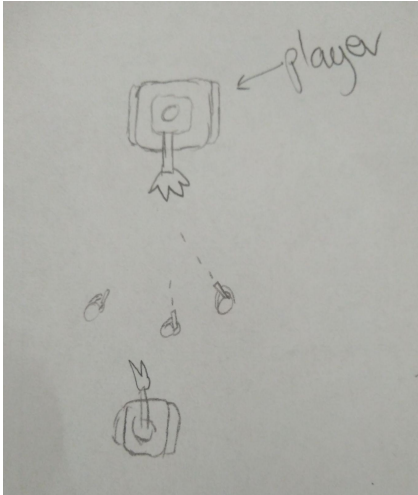
Numbers 1,2,3,4 and 5 to change the different weapons (tank abilities)

There is also a powerup ability button where to get a powerup from the ground and activate it with the key.



### Game Camera

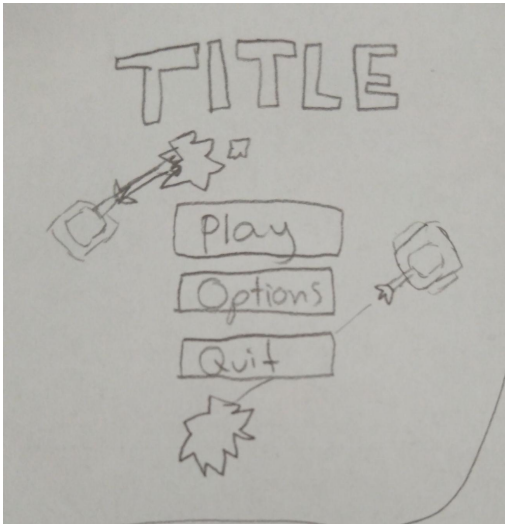
How you intend the game to be viewed, FPS/3rd Person/2d and details/diagrams/drawings  
I intend this game to be viewed Top-down 2d. The player is centred ingame.



## User Interface

List HUD elements and details about them- add sketches

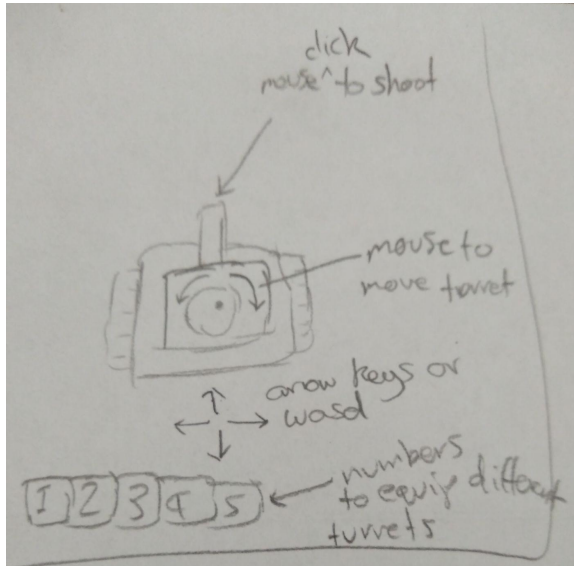
- Random animation in the background for main menu so it doesn't look boring
- The buttons will highlight when the mouse is hovering over it to make the game more alive
- 



## Player

Information about the intended player: character, look, behaviour, movement etc. Drawings are required

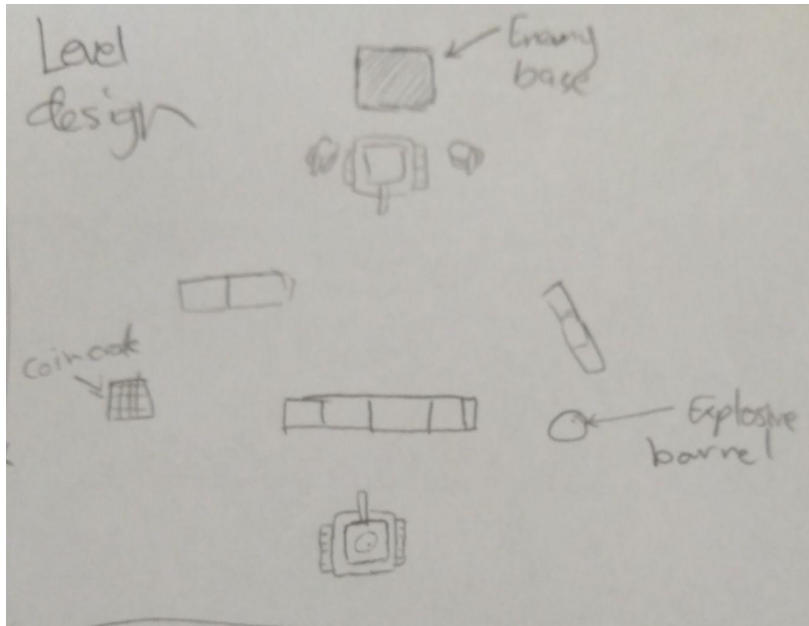
The tank should move with a little bit of acceleration. It will have normal cartoon art. The enemies will have a random shooting sequence when they are shooting at the player so the player can't rely on the sequence to beat the enemies.



## Art

Setting/level design- include rough sketches of what you intend it to look like. Drawings are required. I intend the game to look colourful with cool animations and effects when things explode. I also want the game to have different tank skins so the tanks will look better. There are even power-up abilities on the ground which the player can drive on it and pick it up.





## Audio

Sounds/music etc. Give a brief description of what sound and music you need. List them all.

- Shooting sounds
- Tanks getting destroyed sound effect
- Collecting coins sound
- Background music
- Destroying the base sound
- Different guns sounds
- Ui (clicking on the buttons on UI)
- Different boss themes
- Tank sounds
- Explosions
- Destroying blocks/walls

## Requirements

Requirements are what must the game contain to be considered successful, what is the theme, challenge and goals in broad terms. There

## Specifications

Specifications are a list of technical and measurable things that the game "will have" or "will be" in order to achieve the requirements.

should be at least 5 key requirements.	Note that there should be several specifications for every requirement.
Must have AI that attacks the player	The game will have an ai which will shoot at the player The game will have AI have different weapons so some enemies are harder to fight
Must be easy to control	The game will use arrow keys to move and mouse to move the tank turret WASD movement
Must be top-down shooter game	The game will be 2d The game will be written using Godot The game will run in HD
Must have good art	The game will use Kenney's assets. The game will have different tank skins The game will have good explosion animations
Must have good sounds	The game will have different sound effects Different soundtracks for different levels
Must be able to lose	The game will have enemies that will destroy the tank when your hp goes to 0 If you don't finish the level in time you will explode
Must have a finish	The goal will be to destroy the enemy base and the enemies You can die The game will have some levels where you must kill the boss to win The game will finish by completing every level in the game

<b>Resources</b>
<p>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)</p> <p>Write a bullet point list of all your resources</p> <ul style="list-style-type: none"> <li>• I have a computer</li> </ul>

- Several months to make the game
- Using Godot to make the game
- GDScript to program the game
- I am making it myself
- Using Kenney Assets for game art
- Using Kenney Assets for sound effects and soundtrack in the game
- Creating my own UI

## 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.

This design is going to be good because I think the game has a lot of potential because there aren't a lot of popular top-down shooter games and if there is a good 2D game the gameplay will be strong and must have good graphics for it to be successful. According to gamingsection.net a 2D game is going to be good because it is much faster to create than a 3D game and there are simple controls for 2D games which make it more suitable for beginners and a wider target audience. Because a 2D game is easier and faster to make, the game I am making is in "scope" because I have enough time and enough resources to make the game. This also meets the needs of my targeted audience because the game I am making has simple controls and a simple objective. The feedback I received from different people was very good. They gave me different feedback eg: adding a wallbang feature. These ideas could change the game entirely because the playstyle would be very different.

### Bibliography

<https://gamingsection.net/news/do-2d-games-still-sell/#:~:text=2D%20graphics%20are%20much%20less,will%20always%20be%20going%20strong.>  
<https://www.gamesindustry.biz/articles/2018-11-27-the-future-of-2d-gaming>

## Feedbacks:

Focus on 1 powerup at a time which is a speed boost for the minimum viable product.

Add a minigame where you hack enemy tanks (control other tanks)

Add wallbang feature

Make an endless game mode, add hard difficulty and add a timer so you can speedrun the game with a proper time.

Add multiplayer features.

Add an explosive barrel so you can create a lot of explosive damage to the enemies when they are near it.



## 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 collect 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?

## 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
Merit	Merit	You have justified some of your decisions but have not fleshed it out as much as you should have.

