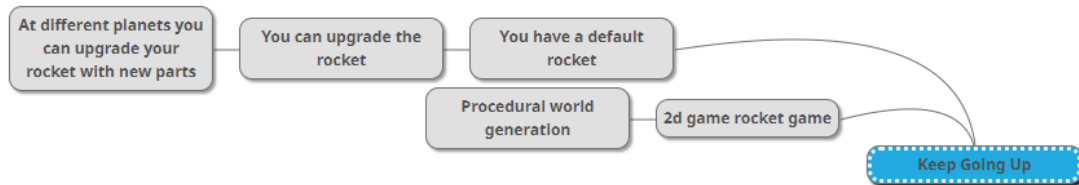
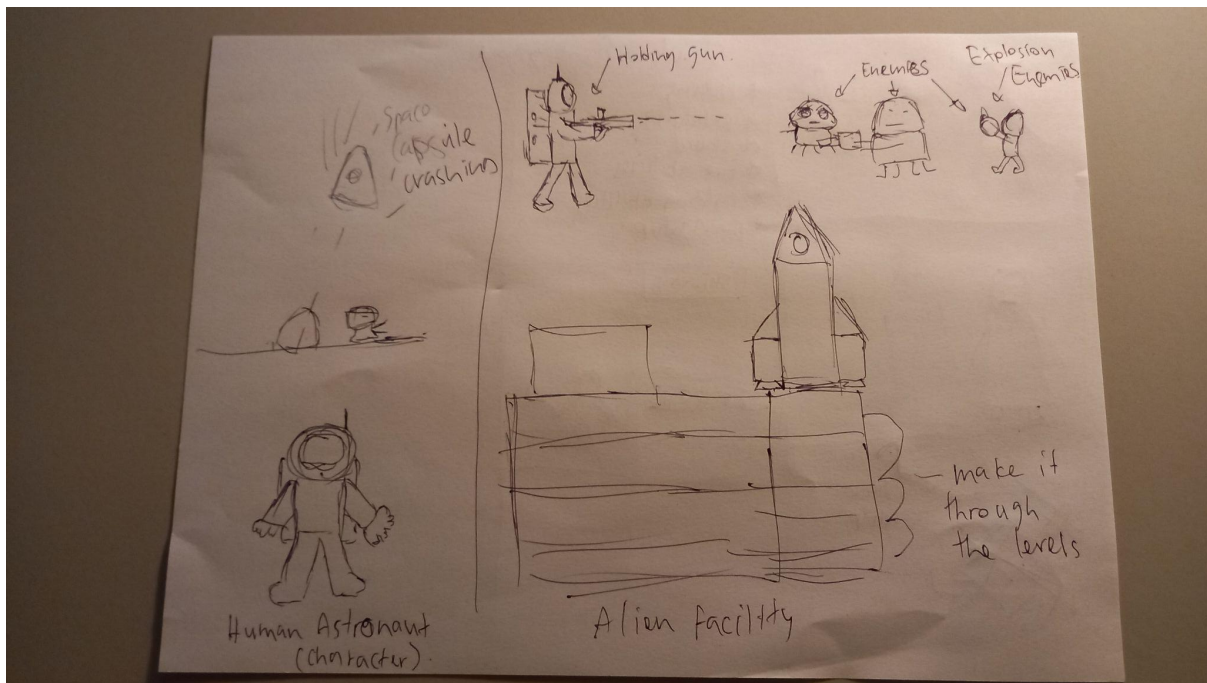
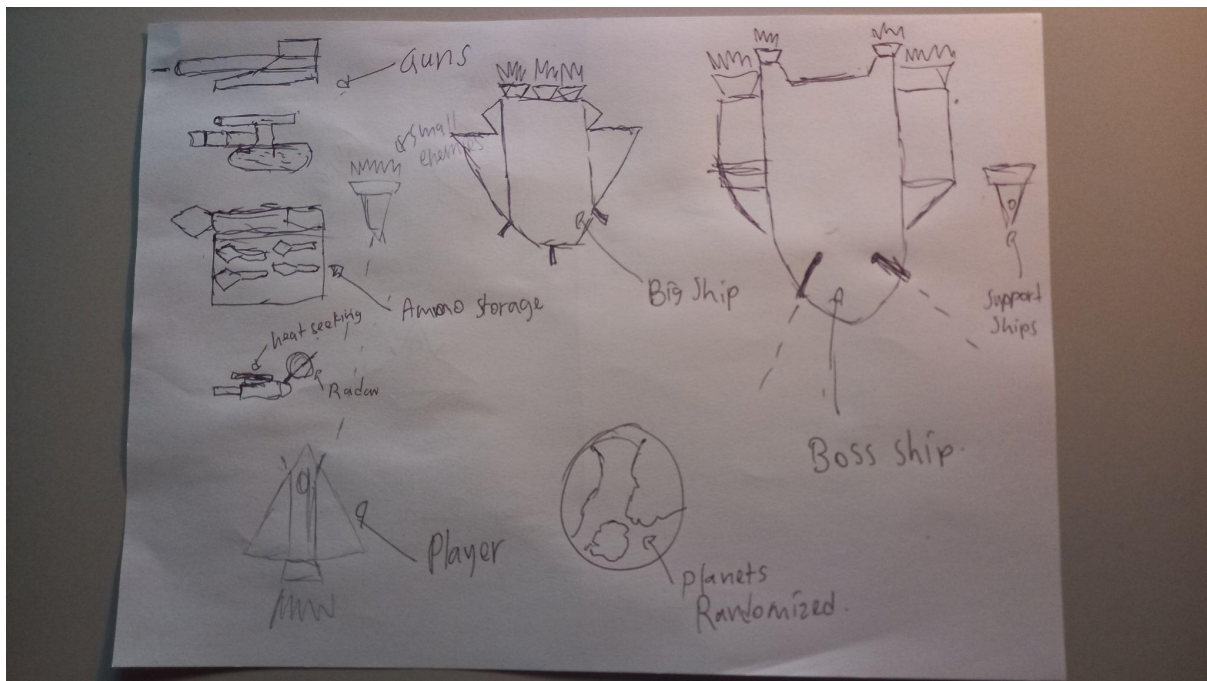


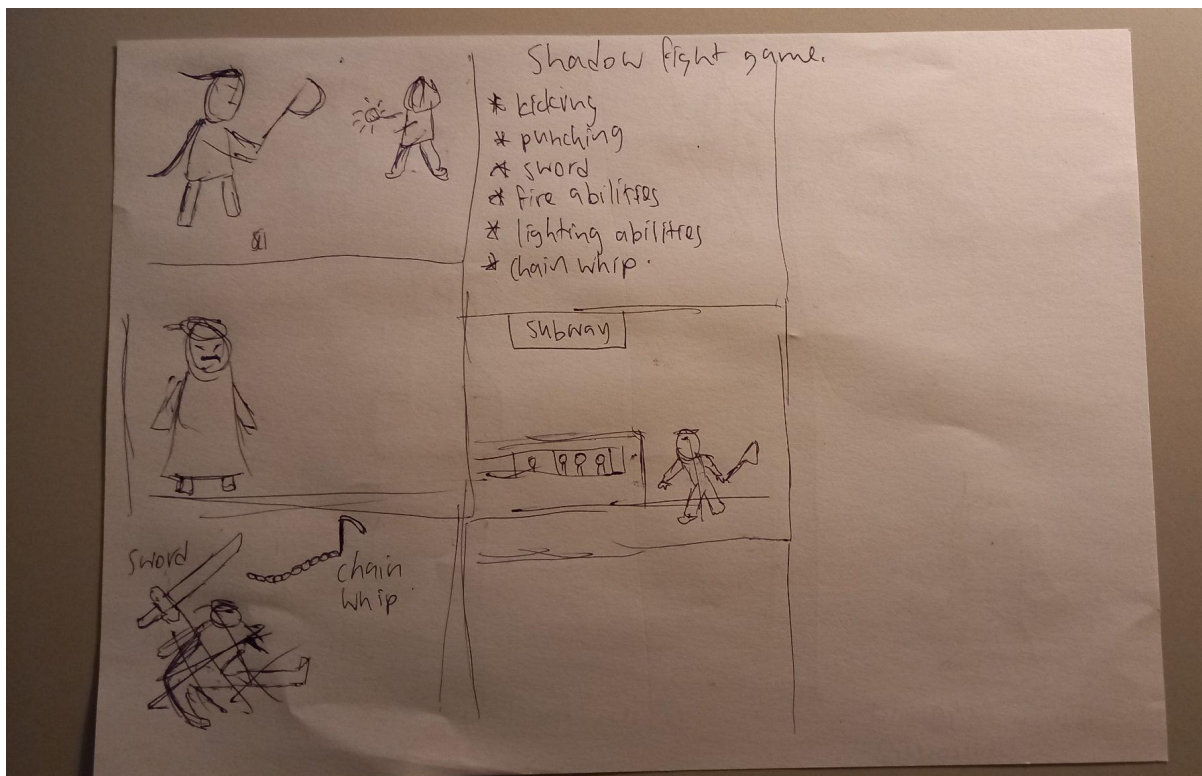
# Design A Game 2022

Generate some ideas

Put your [brainstorms](#) or sketches here







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

<b>Synopsis 1</b>	Grinding 2d rocket game, environment based in space, play as a spaceship/rocket, objective - to get the furthest and defeat the biggest enemy ship. Fuel and ship food will stop us from achieving the goal to the furthest planet, most of the game will be set in space, but at the start it will be set on earth.
<b>Synopsis 2</b>	2d platformer shooter game. This game theme will have a fast paced style to it and will be pixel art. The character will be a guy who crash landed on a planet which he needs to escape by taking an escape rocket. To get to it he must fight all the aliens. The main goal is to take the escape rocket and get home safely. The aliens will be stopping us from reaching the end as we are an intruder. The game will be set in a sci-fi scene where there will be robotic guns, gas guns and many more, and the facility will look futuristic.
<b>Synopsis 3</b>	2d fighting game. This game will have a duo fighting aspect to it such as games like shadow fight 2. We will choose what character we play as, different characters have

	different skill sets, with abilities and different amounts of health and damage. Our objective is to get the furthest in the game by completing the most amount of levels which slowly increases in enemies. There will be a leaderboard system where you can see your friends' scores and try to beat them. A game similar to this would be subway surfers. The amount of enemies will stop us from getting a high score. There will be different settings ranging from subways to deserts.
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## 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!!)
<b>Idea #1</b>	<p>William - I think this game will be pretty good for people who want to kill time such as people waiting in line or something, but I do think that it would get boring after some time such as all grinding games.</p> <p>Ricky - So will the furthest planet be the end of the game? If so, is there a story involved. Or will it be a high score based game with random planets as landmarks? So I'm guessing the upgrades to the rocket will be permanent but will you actually be doing anything while the rocket is mid flight eg. managing fuels etc. or will it be more background/idle? I feel that if you don't have anything to do during the flight of the rocket there won't be anything differentiating the runs, making the gameplay repetitive. Maybe you can add some randomization for every rocket launch, eg. what planets they pass by and the player can make some choices like landing for more resources or something. Maybe a choice system with risk and reward? But aside from the runs feeling like they are the same, I think that the core concept of slowly upgrading a rocket and seeing it grow can be pretty satisfying/rewarding?</p> <p>My Response - I might actually change the timing of the game. Instead of making the game progress slowly I will make it progress quickly so it will be a score based game. So the time to get into space will be faster and planets will spawn in quicker. The aim will be changed from achieving the biggest ship to getting the highest score. This will make the game less boring and more engaging as it's fast paced, also I will put obstacles in the way such as engine failures which you have to solve puzzles to fix. I might randomize the appearance of the rocket but will not change the power and fuel load as to upgrade your rocket you have to progress, gaining resources as you pass planets.</p>
<b>Idea #2</b>	William - This genre in general will be a fun game to play and make, but this genre is

	<p>perhaps a bit too “overused” and might not be competitive to the standard of the better games, making the possibility that this game will feel like a cheap knock off of a popular game, to make this game truly competitive, you might want to include truly unique mechanics and map designs to make the game interesting.</p> <p>Ricky - I think that this game needs a story. Like why is this guy fighting aliens? A simple story would do. I think having a mix of 2 different gameplays will be quite interesting if they are different enough and provide a change of pace that keeps games engaging. Will the upgrades be set based on progression like a normal game where or will it be a rogue-lite/roguelike where the upgrades are random/the player can choose on each run and the game resets on death. If the game will have normal progression I think the player should get new abilities as the game progresses.</p> <p>My Response - I am not trying to make the game to the standard of those big games, The art style and mechanics will be different to those games. A mechanic that I might add is a jetpack mechanic where you can boost up to hop over obstacles and make it so when you kill an enemy then you get fuel or something like that. With the map design I won't make it just shoot enemies and you can go to the next level, I will have it so there is a puzzle solving element such as turning on levels all around the map to unlock the door to get to the next level or a pressure plate system where you have to press multiple pressure plates in order to open certain doors to complete the level. I think this would keep the game unique and not boring. With the story aspect I will make it so you have to save your long lost friend where he got captured by the aliens and you have to go through the castle, solving puzzles to find him. The upgrades for the character will be on a progression based system.</p>
<b>Idea #3</b>	<p>William - Interesting concept, but this game might be a bit too monotone, this game for this game to work, there needs to be a lot of different routes to take, and different combat styles to explore, which might take too long to do and might be a bit too ambitious considering how one game mechanic will work with another and all of the possible interactions that it may or may not make with other weapons, enemies or mechanics.</p> <p>Ricky - So will the player face multiple enemies at once or will it be like a gauntlet of 1v1s. Since the game resets when you die and you have to start from the beginning, I think the game should have some randomness each run or the game will get repetitive. I think something to consider is the enemy ai, it's pretty hard to make ai fair in terms of reaction speed but still smart in terms of decision making.</p> <p>My response - Since this game is based on one area I will add different combat styles or maybe abilities and weapons such as fire and guns. The player will face multiple enemies and as I said doubling each time or getting stronger. Near to the end there will be a random amount of enemies spawning and depending on how many enemies there are there will be stronger or weaker. I will think about enemy ai, I will definitely need to make the enemies follow the player, maybe I will make some enemies have guns to shoot or weapons and there is a random chance of it hitting you?</p>

## Pros and Cons

	Pros	Cons
<b>Idea #1</b>	<ul style="list-style-type: none"><li>- Good for people who like managing games</li><li>- Art will be easier to make as it is 2d</li></ul>	<ul style="list-style-type: none"><li>- Might take along time to make either if i do procedural world generation or just making maps</li><li>- the game might be boring</li></ul>
<b>Idea #2</b>	<ul style="list-style-type: none"><li>- Lots of tutorials of this kind of platformer</li><li>- Fun to make the pixel art</li></ul>	<ul style="list-style-type: none"><li>- level design might take a long time</li><li>- quite a overused type of game</li></ul>
<b>Idea #3</b>	<ul style="list-style-type: none"><li>- Lots of game mechanics to explore</li></ul>	<ul style="list-style-type: none"><li>- Might get repetitive and boring for the player unless I make lots of different enemies which could take a long time to design.</li></ul>

## 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>
<ol style="list-style-type: none"><li>1. If I was going to pick the first one I would pick it because it won't be too hard to get the main game mechanic finished which is making the rocket, and it would be hard to make the game art. Existing outcome of this game is Tiny Space academy and Space flight simulator. Tiny space academy has the managing aspect such as the managing of fuels of the game and space flight simulator has the movement aspect of the game. This game will definitely be finished in this scope. The target audience of this game is for people who want to kill time or just like managing games. I will use photoshop, and configure it for 2d pixel art for the art and godot</li></ol>



2. If I was going to pick the second one I would pick it because the art would be fun to make and the character can have an aggressive playstyle. Some existing outcomes for this game are hollow knight which has the main game mechanic such as the knife fighting and movement and rise of the tomb raider which has the idea that I have upgrade points/stops that I am going to do. The game will probably fit in this scope as there are alot of 2d character tutorials. I will use godot to import the assets and program the game, photoshop to make the pixel art





3. If I was going to pick my third idea I would pick it because I have watched some tutorials that I will implement into the game, such as the random spawning of enemies. One existing outcome of this game is shadow fight. This game can definitely be finished in this scope of 14 weeks. The target audience of this game is people around 8+ years old because there will be swords and guns which will not be good for kids. I will use photoshop for the art work, godot as the game engine.



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



1. [https://docs.godotengine.org/en/stable/getting\\_started/first\\_3d\\_game/index.html](https://docs.godotengine.org/en/stable/getting_started/first_3d_game/index.html)
2. <https://www.youtube.com/watch?v=8NNgZpABmLE>
3. [https://www.youtube.com/watch?v=qd0UTOQ\\_la8&t=274s](https://www.youtube.com/watch?v=qd0UTOQ_la8&t=274s)
4. <https://www.youtube.com/watch?v=6SvQ-T9-BXM>
- 5.
- 6.

## 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 important to consider when making a game because it affects the overall usability and enjoyness of the game as it is what the user sees and visualizes. If the aesthetics don't look good then the user won't have a great experience and would probably stop playing. For example a game such as Tiny space academy has a simple game aesthetic and there is not much variation in aesthetics from different game assets, which makes the game look nice. This is important in my rocket game. I need to keep a simplistic 2d game aesthetic, and in my platformer and shadow fight game I need to keep a 2d pixelated aesthetic. In all of my ideas I must keep the same game aesthetic for each game asset.
Functionality	Functionality is a very important aspect of a game as if your game doesn't function properly the player/user will not be able to interact and play

	<p>through your game, making it feel not polished.</p> <p>For example if your game has alot of bugs, glitches or errors that affect the user then the user will spend a lot of time either trying to fix the glitch that they might think that it is only their computer with the problem, or the user will uninstall your game. Both of these are bad as you spend all this game making your game as people dont play it probably because of a simple bug. This is why play tests are very important as you don't want to release a game with alot of bugs .</p> <p>My game has to be functional without major bugs, so this also links with the scope of the game because I have to leave around 1 or 2 weeks to playtest and fix bugs. Also if I have time I will need to make my game</p>
Usability	<p>Usability is also a very important aspect of the game. Usability is how the human/user interacts with your game. We need to make sure that our game buttons/sliders/etc work, function and work properly and make it easy to use for the majority of users.</p> <p>This links back to the functionality aspect as if your game as if buttons such as the volume slider changes the graphical settings then this bug affects the usability and functionality of your game. Also your game has to be simplified for a normal human as most people for example your graphical settings needs to have presets for the majority of people to choose and maybe some advanced graphical settings for the small group of people who know these settings.</p> <p>This is also how I am going to make my games usable and functional by making sure that the obvious game implementations are in such as when you press escape a pause menu comes up and the graphics options are a drop down menu and not a slider. Also making sure to play tests to get constructive feedback or criticism.</p>

# Game Design Document

<b>Title:</b> Keep Going up
<b>Genre:</b> Space, Rockets, Offline
<b>Target Audience:</b> People who like quick games

<b>Synopsis</b>
<p>One paragraph.</p> <p>My 2d rocket game is going to have a fast paced mechanic built/score based game. At the start there will be your brother that has been captured by aliens and your aim is to find him and beat your friend's high score. We play as Jack, the person who is operating the rocket. The alien ships roaming in the path of your journey and your fuel load are stopping you from going further. You automatically get fuel at the start of the level. This game is mostly based in space and is going to have nebula galaxy backgrounds. This is going to be a game similar to jetpack joy ride but not as fast of a progression.</p>

<b>Game Objectives</b>
<p>What the player has to do to win and how they are stopped from winning</p> <p>The main objective is to reach the end planet and save your brother. Fuel is one of the things that stop the player from winning. You will automatically refuel at the start of the level and you have to manage the fuel throughout the level. Throughout the level there are enemies that you have to use your guns to defeat, you also get a certain amount of ammo so be careful on how you use them.</p>

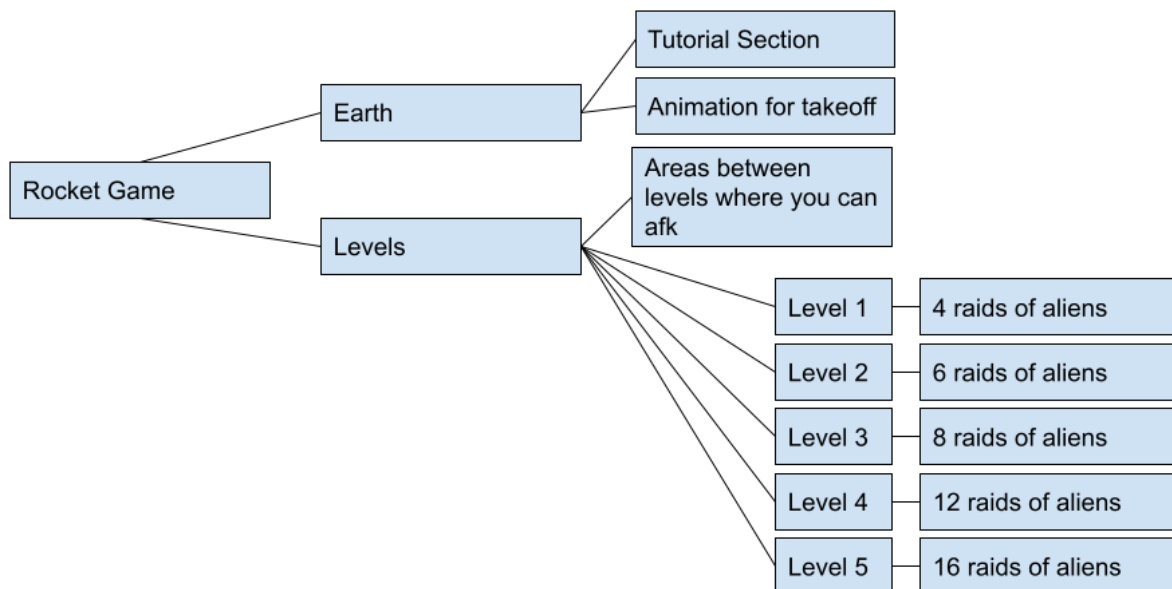
## Game Rules

All the game rules- win/lose/scoring

The game is based in an environment where side to side movement is limited. As levels progress you will have a certain amount of side to side movement as you pass through smaller passages through the black holes. You must kill all the aliens to pass the levels. If you lose all your fuel your velocity will decrease which will slow you down making it impossible to progress to the finish which means you have to restart.

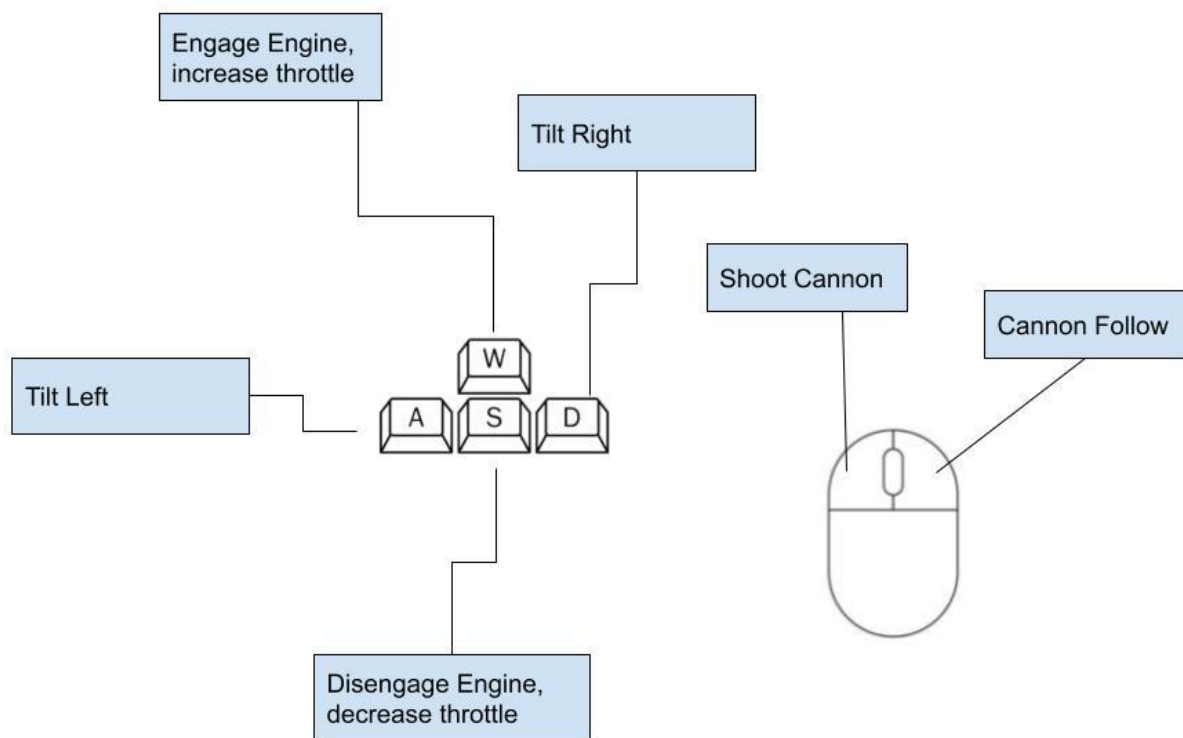
## Game Structure

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



## Game Controls

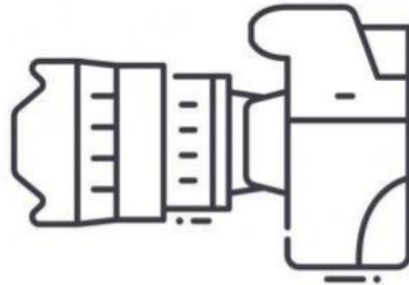
Instruction of how you intend to have the game controlled on the intended platform- keyboard/mouse and details. A diagram is required



## Game Camera

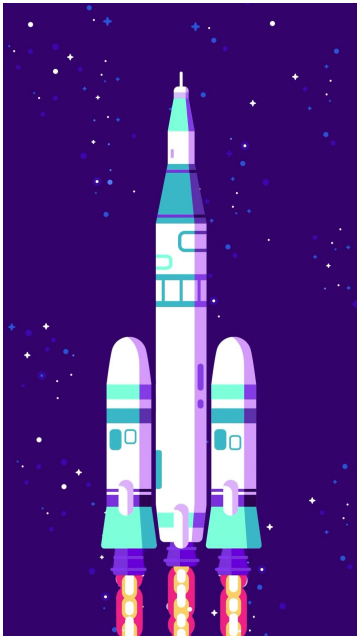
How you intend the game to be viewed, FPS/3rd Person/2d and details/diagrams/drawings

At the start of the game the camera will be viewed in a 2d perspective side view of the rocket.



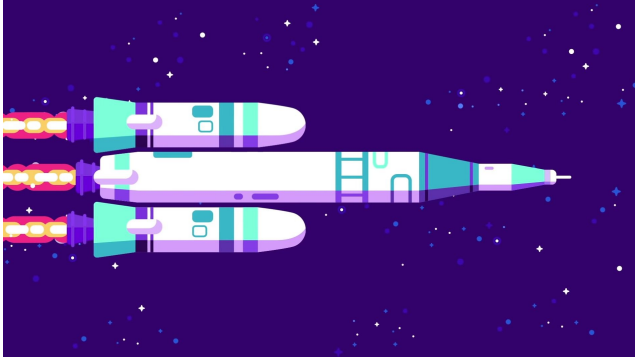
Pictures below are the camera view.

When fighting aliens it will be something like this view.



When in the LevelSelect/refueling area select mode this will be the view or in the upright view when you're on the launchpad, it's in orbit.





## User Interface

List HUD elements and details about them- add sketches

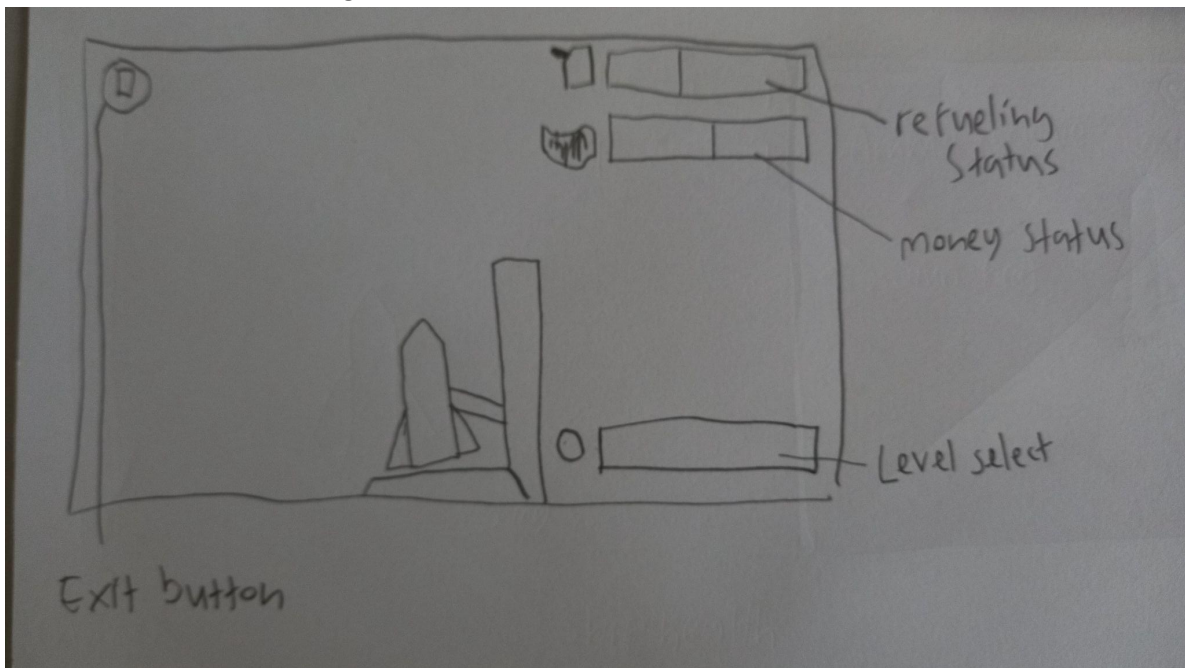
This is the LevelSelect/refueling area. Either the rocket will be on the launchpad or flying. With either one the HUD elements are the same.

Your rocket will refuel when you arrive at different planets so the refueling status is a bar showing how much fuel you have in your rocket.

The money status is how much money you have.

Level select is where you have to click to select the next level.

The Exit button is to exit the game.



When your playing a level this will be the HUD.

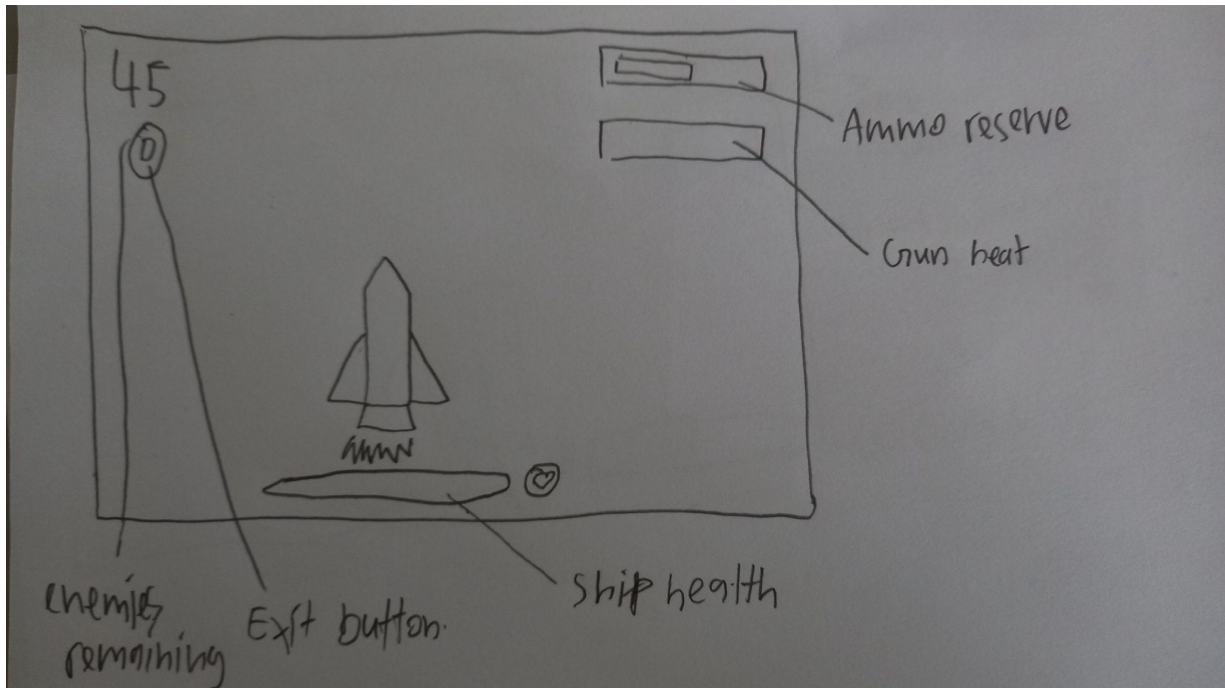
On the top left (45) this is the remaining enemies.

Underneath the remaining enemies is the exit button.

Underneath your ship is the ships remaining health.

On the top right is the remaining ammo in the ammo reserve.

Underneath that is the gun heat, if it overheats you need to wait for it to cool down.



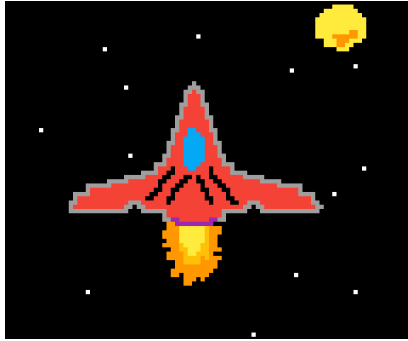
## Player

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

The player has been captured by aliens who warped drive to another planet. You are stuck with a basic rocket. Your goal is to upgrade your rocket and make it through the levels of enemies to get to your brother on the final planet. You will be playing as a character called Jack, he will be the one who is inside the rocket.

The rocket will be the main 'player' that you control.

The rocket will be in pixel art as it is the easiest to make and



I will be using around 10 different types of spacecraft to upgrade to.

Engine Modes (you can set the thrust with the slider as well)

- Idle
- Cruise
- Full Thrust

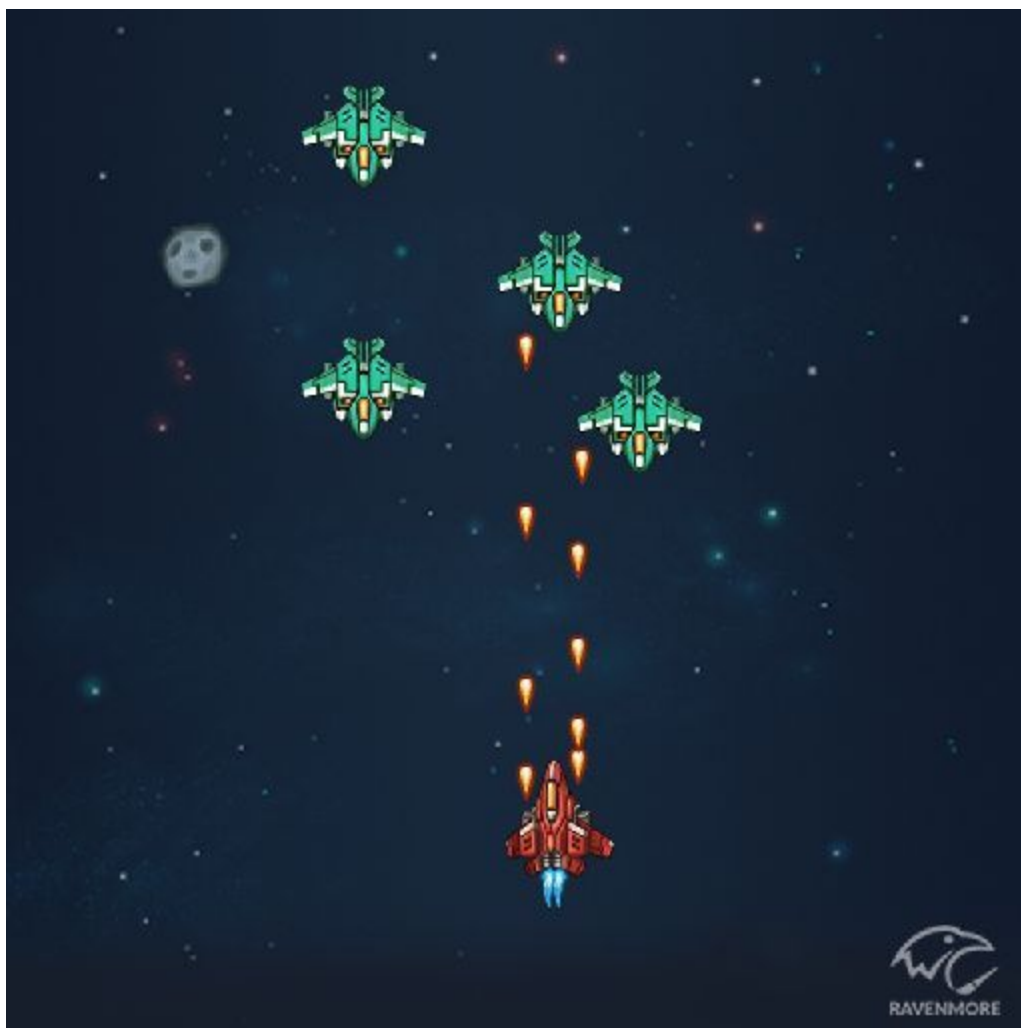
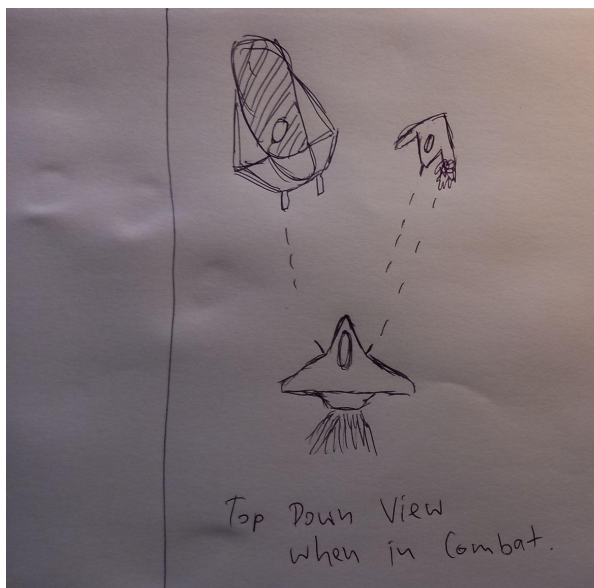
#When the engines are at full thrust the spacecraft will start to shake

Weapons

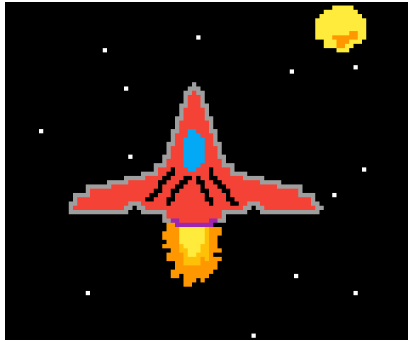
- Default Gun - 1 bullet per  $\frac{1}{4}$  second doing 300 damage
- Missile Launcher - 1 Missile every 3 seconds taking away triple the amount of health as the default gun.
- Slick Destroyer - 1 bullet every  $\frac{1}{2}$  second doing 400 damage
- Destroyer - 1 bullet every  $\frac{1}{3}$  second doing 600 damage
- Burst Destroyer - Burst 5 bullets every  $\frac{1}{4}$  seconds, same damage as slick destroyer with a cool down of 3 seconds.
- Minigun - Rapid fire of 1 bullet per  $\frac{1}{8}$  second

**Art**

Setting/level design- include rough sketches of what you intend it to look like. Drawings are required.



Art style will be something like above, pixel art and simplistic.



Something Resembling this would be the player.

## Audio

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

MENUS_FX	Menu background sound.
LEVELS_FX	Start if level sound tracksounds.
FIGHTINGS_FX	Fighting background sound track.
PLAYERBULLET_FX	Noise made by firing a bullet.
ENEMYBULLET_FX	Enemy Fire sound
ROCKETFLAME_FX	Rocket Engine sound
FUELING_FX	Rocket Fueling up sound
SMOKELOLH_FX	Gas released by rocket sound
GUNOVERHEAT_FX	Beeping noise made by the gun overheating
ROCKETLANDING_FX	As the rocket gets closer to the ground the noise gets louder.
ENEMYDIE_FX	Enemy Dying sound

PLAYERDIE_FX	Player Dying sound
ALIENTALK_FX	Alien talking sound, some random words.

Requirements	Specifications
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.	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 in 2d	All art must be 2d made in photoshop or any other art softwares. Must have 2d physics.
Must be able to run on most low end computers	Must have simple to render sprites. Has to have a fps limiter as unlimited fps can increase fan noise on laptops. Main parts of the code must be optimized.
Must have a upgrade system	Speed your rocket travels at Gun damage increase Upgrading stuff will increase the quality of the image.



Must look good	Has well built pixel planets and nebula galaxies. Sprites must not be blurry and rendered in a high resolution without affecting too much performance. Must have good particle effects such as the rocket flame.

Resources
<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>● Photoshop - For the pixel art</li> <li>● Godot - Game engine</li> <li>● Computer</li> <li>● Youtube</li> <li>● Godot Docs</li> <li>● 15 Weeks</li> </ul>

## 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?

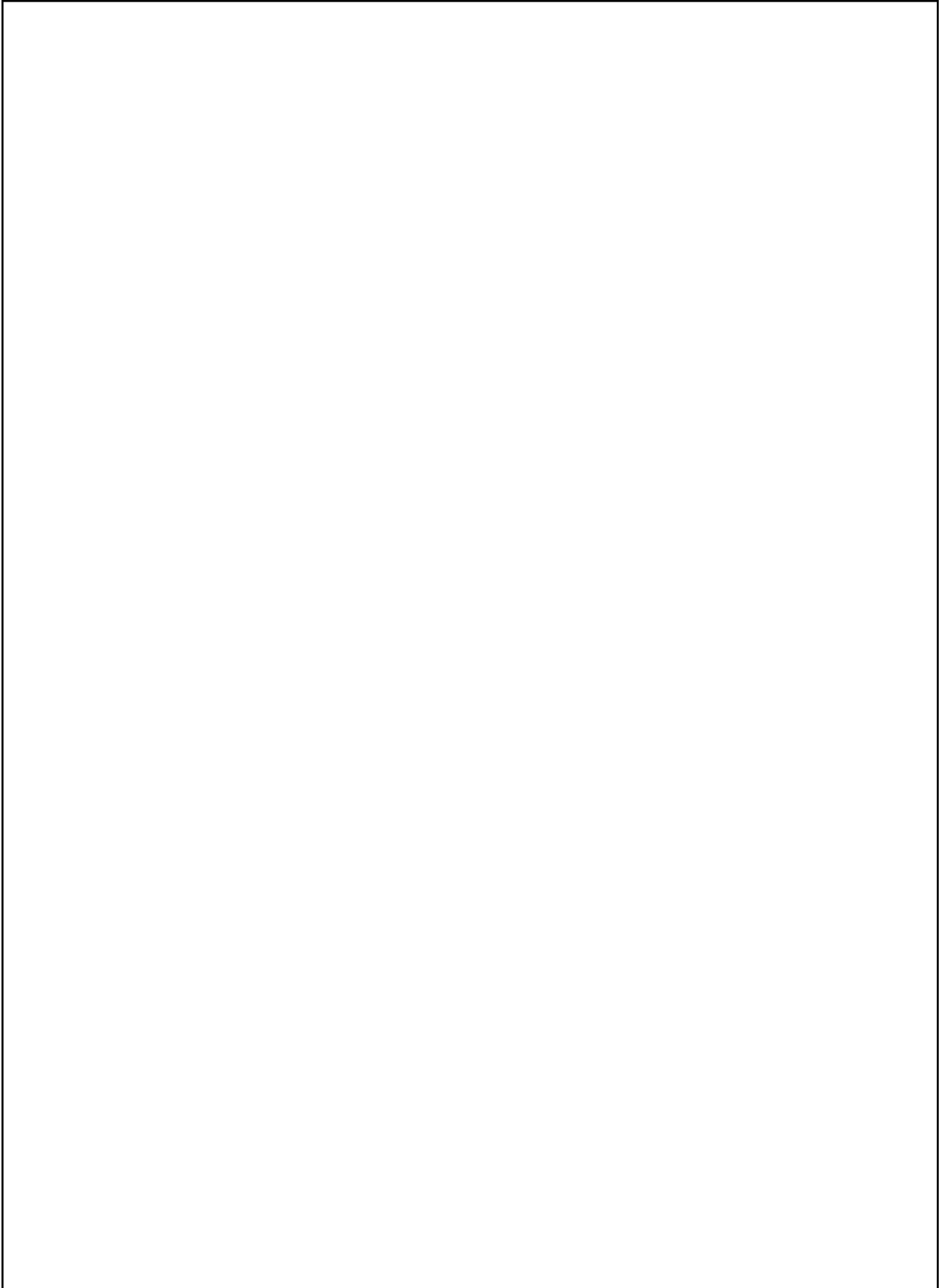
Don't forget to include research to back up your claims. Use the internet and add a bibliography of websites or articles that you used. The better you do this section, the better the mark you will get.

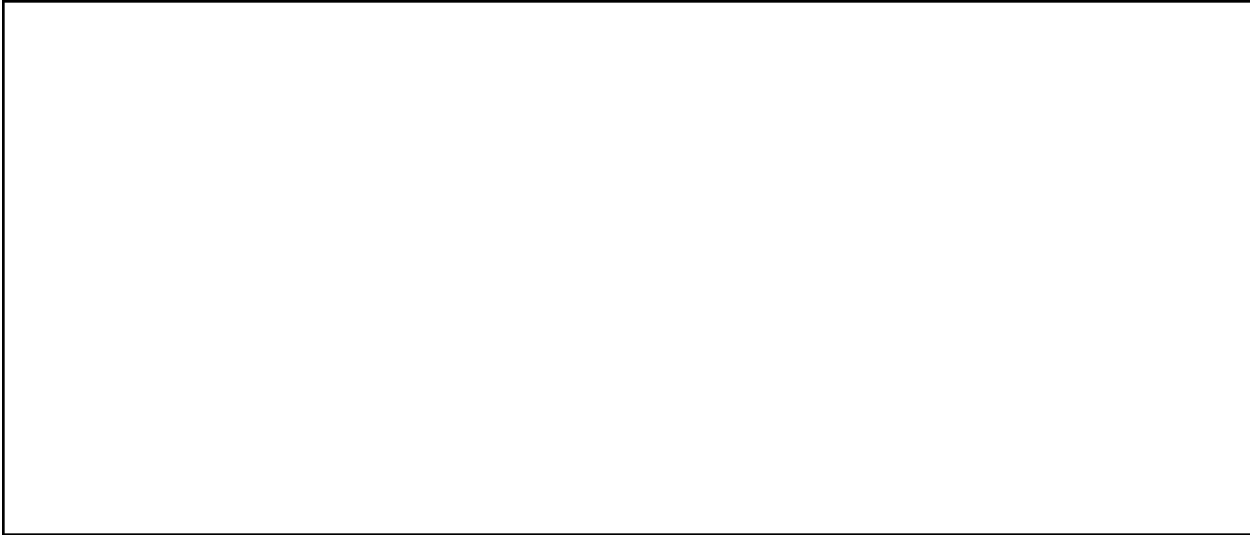
My game will be a good game because I think that it makes for a good fast paced game such as games like jetpack joyride. It fits this theme as most of the levels don't have to make you wait for so long and things such as overheating, fuel, ammo depleted fast, which makes it feel fast paced.

It meets the aesthetic requirement as I am going to make sure all the important assets are pixel art and not anything else and this can harm the user experience. Also I am going to make sure that all the pixel art is in a high enough resolution so It doesn't look blurry to the user. For the functionality requirement I am going to make sure the game has no game breaking bugs that will ruin the user experience. For the Usability requirement I will make sure the buttons are positioned in the appropriate place, and the health bars, ammo count, etc are working correctly and have immediate popup warning to display to the user.

As I said at the start, the requirements for the target audience will be met as the levels will be fast paced and enemies will keep coming in as waves. The game mechanics such as overheating, fuel load, will be quick to keep the user engaged instead of them just shooting enemies for all the levels, this overall makes it a fast paced game. An example of a fast paced game is the first link below.

1. <https://www.youtube.com/watch?v=6SvQ-T9-BXM>





## 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



