Team IDK

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🛠️ Division of Work

This Iteration:

All:	Improved our game mechanics based on feedback of last iteration; coded digital prototype with modified sprites from the Internet; changed the design questions for playtest sessions and increased participants to get more feedback
Alex:	Coded the first boss; worked on GDD; designed logo; ran a playtesting session.
Brandyn:	Coded the menus; finalized the GDD; ran a playtesting session
Ruilin:	Redesigned the sprites; ran a playtesting session; Presentation Slides
Ishpreet:	Coded the player, three enemy types, second and final bosses, UI and put all the code together; ran a playtesting session

Next Iteration:

All:	Redesign all of the sprites implemented in our game; balance specific mechanics of the game
Alex:	Code different types of projectile in the game and redesign the sprites which are originally designed by Ruilin if needed.
Brandyn:	Add sound to the game
Ruilin:	Code different types of projectile in the game.
Ishpreet:	Add more feedback to player actions, polish animations and bug squashing

🔍 Refined Game Design

Target Audience:

Age:	16 - 25
Gender:	Any
Gamer Type:	*Hardcore.* The type of gamer that our game attracts is hardcore players seeking to challenge themselves. The game starts off simple with basic mechanics that are easily learned, but quickly ramps up in difficulty by adding in new mechanics on top of mastering the previous mechanics.
Player Type:	*Achievers and Conquerors.* The game focuses on the difficulty that comes from the interplay between the player and opposition mechanics. Since the game features a one-hit death system for the player, there is a sense of

	accomplishment whenever a level and its newly introduced mechanics are overcome.
Play Styles:	*Challenge.* The gameplay loop is designed to challenge players on how well they are able to control the character to dodge projectiles from enemy as well as eliminate enemy by shooting and using the abilities at a right time. Learning how to utilize different abilities and new mechanics introduce continual learning and relearning of the core mechanics. In addition, each type of enemy has different movement patterns and methods of attack which force the player to adapt and evolve to new situations.
Fun Keys:	*Hard fun.* Encountering a new enemy type is always a learning experience that requires the player to observe and figure out what their attack patterns are. Defeating the mechanics that you figure out on your own will feel rewarding to players.
Adjustments:	The target player for our game remains the same as our previous iteration, but we have enhanced the aspect of challenge as well as the reward for overcoming these challenges to better suit our audience. The genre of our game is also more akin to that of a bullet-hell game instead of a strategic top-down shooter.

Revised Mechanics:

Core:	Movement in any direction
	Basic blaster
	Dodge
	Charged Shot
Enhance:	Dash (Boss 1)
	Charged Shot (Boss 2)
Opposition:	100 point Energy meter
	10 energy - fire
	20 energy - dodge
	30 energy - charged shot

Revisions:

Real-time:	With the digital prototype, we were able to carry out the gameplay in real-time as opposed to our physical prototype in which we used a turn-based system to simulate real-time. The turn-based system helped us to provide the most accurate representation of real-time, but made the game feel slow and more strategic/tactical rather than action-oriented. With

the player, enemies and projectiles all performing at the same time, the game experience is faster paced.

Speed: Instead of simply converting our turn-based prototype into real-time, we also decided to increase the overall speed of the game so that the player relies more on instinct and reaction which is present in the action genre and the concept of our game.

Fire Rate: The energy cost for the player to fire has been reduced and the player is able to fire at a faster rate so that the player can fire more often and isn't required to carefully consider whether or not they should fire. The game also evokes more qualities of a shooter when the player is granted more freedom in firing. However, the rate of fire will need to be tested with the digital prototype to see if it is too fast, or needs to be decreased.

Charged Shot: We have added in the ability for the player to fire a charged shot after defeating the second boss. This ability is to provide the player with a wider variety of gameplay options to use and consider when playing the game. It also helps to prevent a repetitive feeling of performing the same actions over and over again by including a new action that can be taken.

Final Level: On top of the first two levels, there is also the third and final stage of the game in the digital prototype. This stage introduces a new enemy that attacks differently to the previously encountered enemies and changes up the gameplay.

Ant Lion Boss: At the end of the third level, we have added in the final boss. This boss uses the abilities of the first two bosses while performing an entirely brand new ability. Through playtesting of the digital prototype we will have to test if the boss is too hard or if we will have to reduce a particular aspect of it, such as its fire rate or movement speed.

Storyboard:

Prototype Rules:
Player Mechanics:
1. Player starts at the bottom middle of the screen for every phase
2. Player can move in any direction
3. Player starts with 100 energy
4. Energy will be consumed for every action
5. Player regains 10 energy every 1 second

Dodge:
1. Acquired from first boss

2. Can be used to dash in any direction a set distance
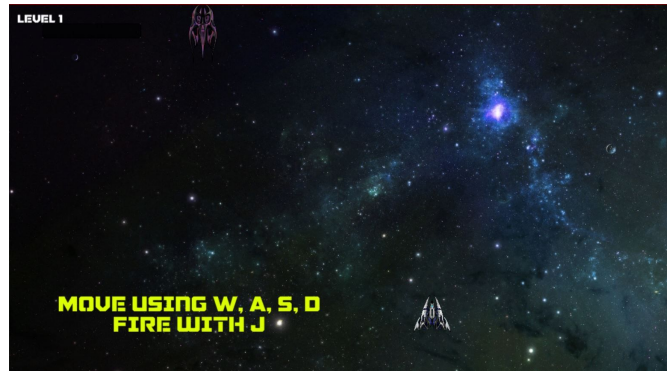3. Consumes 20 energy

Charged Shot:
1. Acquired from second boss
2. Can be used to fire a more powerful projectile after a charge time
3. Consumes 30 energy

Prototype Progression:

Level 1 (Start Phase):
- Defeat a wave of enemies to reach the boss
- Standard enemies will stay at the top of the screen
- They move right and left
- They fire projectiles at random intervals

Level 1 (Electric Ant Boss):
- Boss will move right and left, similar to standard enemies
- Fires a projectile every second
- Starts dash ability, indicated by a lightning symbol, and uses it two seconds later, moving a set distance in a random direction
- Has 50 health points and loses one every time it is hit
- Defeating the boss will grant the player the dodge ability
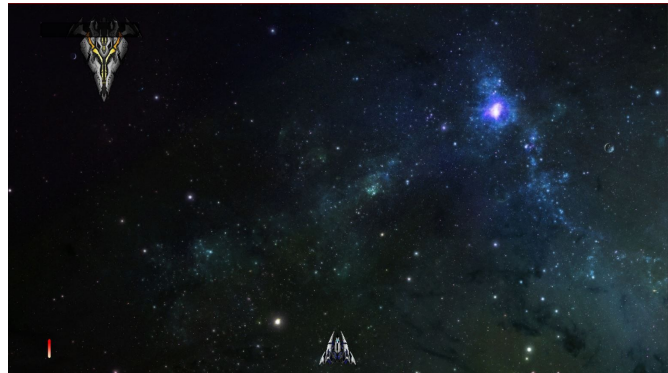
Level 2 (Start Phase):
- Defeat another wave of enemies to reach boss
- Standard enemies will spawn
- Type 2 enemies are introduced, and move diagonally, and switch direction randomly
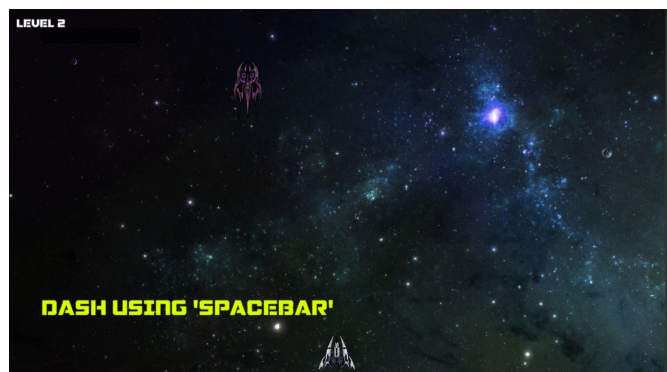
- Type 2 enemies will move into the player area and kill the player if they hit them

Level 2 (Fire Ant Boss):
- Fires two projectiles every three seconds
- Starts a charged shot that will fire two seconds later
- During charging, the boss will follow the player's movement
- Charged shot fires a wide beam down the screen that will kill the player
- Has 100 health points and loses one every time it is hit

Level 3 (Start Phase):
- Defeat another wave of enemies to reach boss
- Standard enemies will spawn
- Type 2 enemies will spawn
- Type 3 enemies are introduced and chase the player
- Type 3 enemies will follow the player's movement and kill them if they hit them

Level 3 (Ant Lion):
- Will perform all the actions of the first and second bosses
- Performs a charge move where it moves to the bottom of the screen and then back up, killing the player if it hits them
- Has 200 health points and loses one every time it is hit
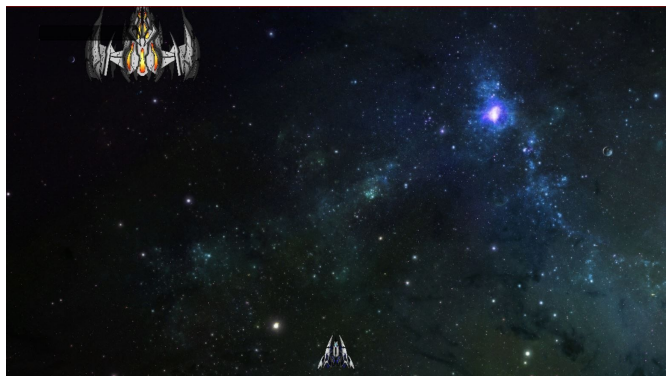
Playtesting

Design Questions:

Scale: Is the play area large enough for the player to perform their desired actions, such as moving and dodging, or does it feel too cramped and that movement is restricted?

Energy: Is the balancing act of the energy mechanic enjoyable?

Energy: Does the energy mechanic add a meaningful addition to the combat while still giving the player enough agency to not feel like they don't have control over their outcome?

Fire Rate: Does the player fire at a reasonable speed? Is the player killing enemies too fast, or too slow?

Fire Rate: Does the rate at which the player fires consume energy too quickly? Should firing cost more energy to perform?

Speed: Is the speed at which the projectiles move appropriate? Is is too easy for the player to dodge enemy projectiles, or too hard? Is it too difficult for the player to hit the enemies, or too hard?

Difficulty: Does the game feel balanced at every stage in the game? Do deaths feel random or are the reasons why the player dies clear enough?

Difficulty: Does the game introduce new challenges at a reasonable rate and are the challenges evenly incremented from the previous section, or does difficulty ramp somewhere?

Difficulty: Is the final boss too difficult to defeat? Does it utilize too many mechanics that it becomes confusing to the player as to what is occurring in the game?

Health: Is instantly dying reasonable or should the player have a health bar? Should Energy also contribute to the player's health?

Health: Do enemies have too much or too little health?

UI: Is the User Interface clear enough for the player to understand? Is it noticeable and apparent while the player is focusing on the gameplay?

Ability: Do the abilities feel meaningful to use?

Ability: Will the player choose to use the dodge and charged shot rather than simply move and fire?

Setup:

Sessions: 4

Location: Brandyn's home, Zoe's home, Ish's home, Alex's home

Testers: 1-2

Sessions:

Brandyn's Session

Tester 1
Age: 16
Gender: Male
Gamer Type: Achiever, Conqueror and Hardcore. Likes to complete everything that is offered within a game as well as play competitively against other players. Plays games 20+ hours a week. Favourite game is Dark Souls.
Play Style: Challenge. Enjoys games that provide a challenge and the feeling of success after overcoming a difficult obstacle.

Tester 2
Age: 22
Gender: Male
Gamer Type: Achiever, Socializer and Casual. Mainly plays games to enjoy the experience and also enjoys playing cooperative games with friends. Plays games 20+ hours a week. Favourite game is Fallout 3.
Play Style: Fellowship, Narrative. Enjoys games that focus on story and lore, especially if they can be experienced with others.

Zoe's Session
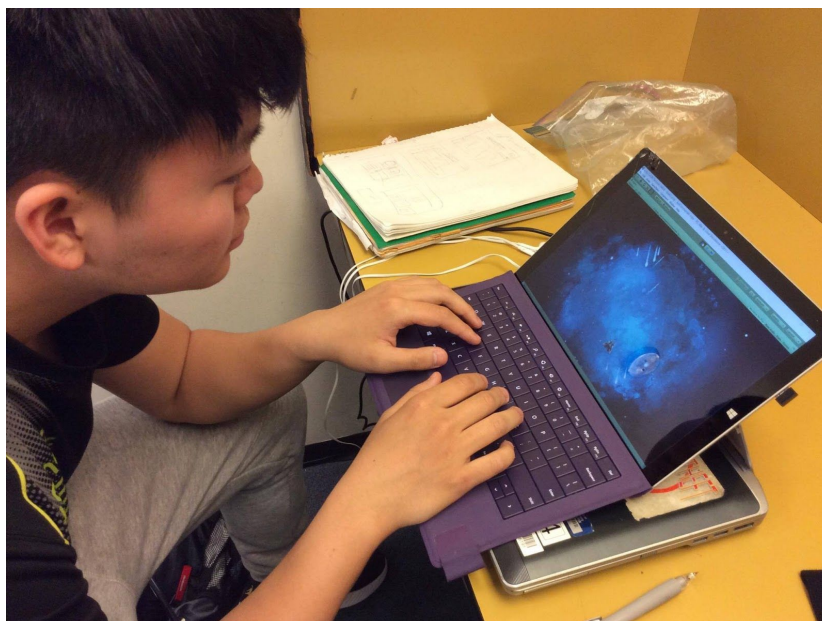
Age: 18
Gender: Male
Gamer Type: Achiever and Hardcore. Likes to finish the tasks within games in order to achieve the highest level. Plays games 20+ hours a week. Favourite game is League of legends.
Play Style: Challenge. Enjoys using the game mechanics in order to overcome obstacles or other players.

Alex's Session
Age: 23
Gender: Female
Gamer Type: Socializer and Casual. Likes to hang out with friends and play board games or minigames. Plays games 3 hours a week. Favourite game is Angry Birds.
Play Style: Fellowship, Submission. Prefers easy-fun games and enjoys killing time with friends in these games.
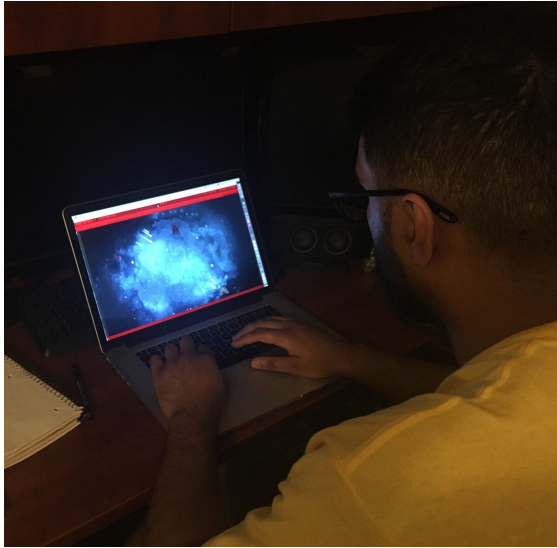
Ish's Session:

Age: 25
Gender: Male
Gamer Type: Achiever, Socializer. Enjoys games based on team play and skill
Play Style: Challenge and Discovery. Enjoys exploration and rewarding combat

Age: 23
Gender: Male
Gamer Type: Achiever. Enjoys difficult games, like. Dark Souls, as long as the mechanics aren't unfair. Hardcore. Plays games 10+ hours a week.
Player Type: Challenger. Likes games that offer a challenge as long as it is fun to learn the challenge and not a chore.

Procedure:

For the playtests, we started by telling the players the name of the game as well as the genre. We asked them a few questions regarding basic information, such as what types of gamer they would consider themselves and what games they enjoy to play. We then gave them basic instructions on how to play the game and nothing else. They were left to figure out and discover the rest of the game through playing.

After 20 minutes of playing, regardless if the player defeated the final boss or not, we asked the playtesters some follow-up questions. The questions revolved mainly around the overall pacing and speed of the game, the difficulty of each level and the rate at which the difficulty increased, and if any parts of the game felt unfair or too easy.

Observations:

The majority of the testers were able to quickly understand the mechanics of the game. Only two of the players were able to complete the game within our allotted time, but all of them managed to at least make it to the second boss. When each player got stuck on a certain level after dying a few times, we could see frustration mounting on their face, but after getting past that level, we could also see their satisfaction of completing that level. There were no discernable strategies or patterns of gameplay we could determine from the testers. However, one interesting thing that we noticed was that the hardcore players, who play games on a regular basis, tended to use the player abilities fairly often, whereas the casual players rarely used the abilities and mainly just moved and fired.

Playtesting Results:

From the playtesting sessions we discovered that the task of trying to overcome a difficult level is quite enticing to many players. The overall speed and difficulty of the game seemed relatively balanced, with only a few adjustments that need to be made. The amount of projectiles that are fired by the standard enemies might need to be increased, as they seem a little too easy to defeat. The number of shots that the player can fire before running out of energy is also on the smaller side, so the player feels a bit bored when simply waiting for energy to recharge to be able to fire again. The UI isn't that apparent in the game since it is on the edges of the screen, and the player doesn't really pay attention or notice it when all their focus is on the gameplay that mainly occurs in the center of the screen.

<u>Reflection</u>:
From creating and utilizing both physical and digital prototypes, we were able to see their importance in designing games. Playtesting is essential to creating games, as it might seem like the initial idea is strong, but from testing it, we can see what works and what doesn't work in the game. With the physical prototype, we can discover if the core mechanics function and if they are fun or not for the player. However, the game can't really be balanced from data obtained through testing the physical prototype. That is where the digital prototype comes in. Once the core mechanics and gameplay are solidified, then the game can be balanced from playtesting the digital prototype and making the game feel fair to the player.

Some of the responses from the playtesters were unexpected. Many of them actually enjoyed our game quite a bit, which was a little surprising as we were hesitant at first if our game would be fun for the player. The playtesting really helped us to see how our game would be played. Something we did expect was that players would get a little frustrated from dying multiple times in a level and get motivated to try to beat the level. This was what we were aiming for, to get the player more invested in our game and learn from their mistakes. However, we did not expect that certain players would dislike the difficult aspect of our game and find that the difficulty actually took away some of the enjoyment. As with every game, we also expected balance issues to be brought up, with some of the players mentioning issues about movement speed and energy consumption.

Overall, we have learned the importance of building prototypes and for testing them with a variety of different players. Getting player feedback is essential and the only way to do it is from getting actual players to test the game. From this feedback, unexpected knowledge and data will be brought to life, assisting in enhancing the final product of the game.

References

Section icons by Nick Roach, GPL License, iconfinder.com

https://www.iconfinder.com/iconsets/circle-icons-1

Game Background Image

http://wallpapersafari.com/w/L8GyOS/

Game assets taken from and modified

http://millionthvector.blogspot.ca/p/free-sprites.html

Additional game assets created by the team

Prototype images taken in-game

Playtesting images taken by the team