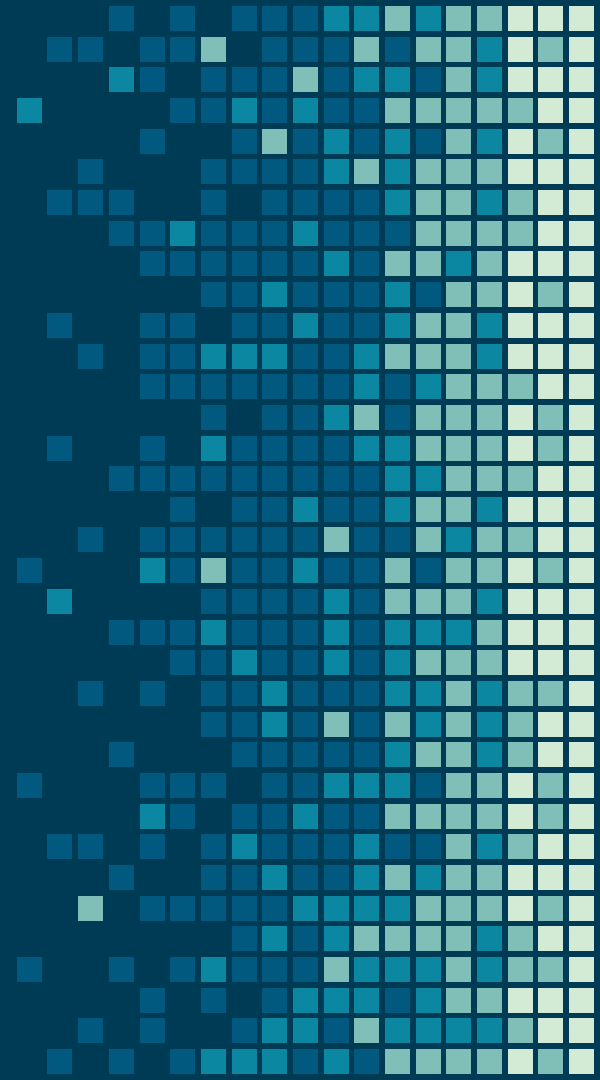


















Final – Space Battle

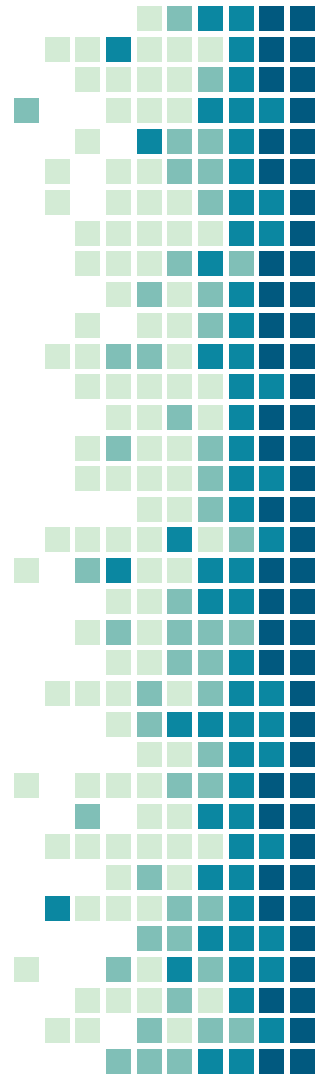
Foo Fang Jee

Michelle Chai Mei Wei



Character Design

Texture	Class Name	Technical aspects			
		Health	Movement Speed	Fire rate	Bullet Texture
	Player	5	300.0f	300.0f	 (Normal bullet)  (Missile)
	Asteroid	1	100.0f	-	-
	Turret	10	-	600.0f	
	Enemy1	3	100.0f	700.0f	
	Enemy2	7	150.0f	300.0f	
	Boss (Level 1)	25	200.0f	250.0f, 160.0f	
	Boss (Level 2)	50	200.0f	200.0f, 160.0f	



Level Design – Level 1

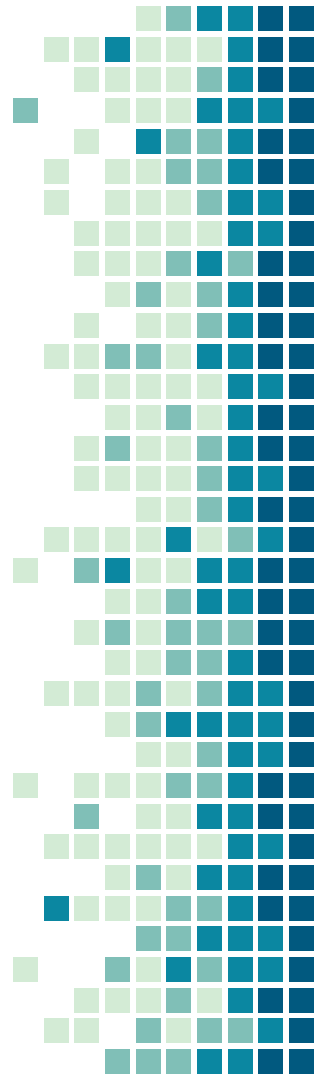


Level Design – Level 2



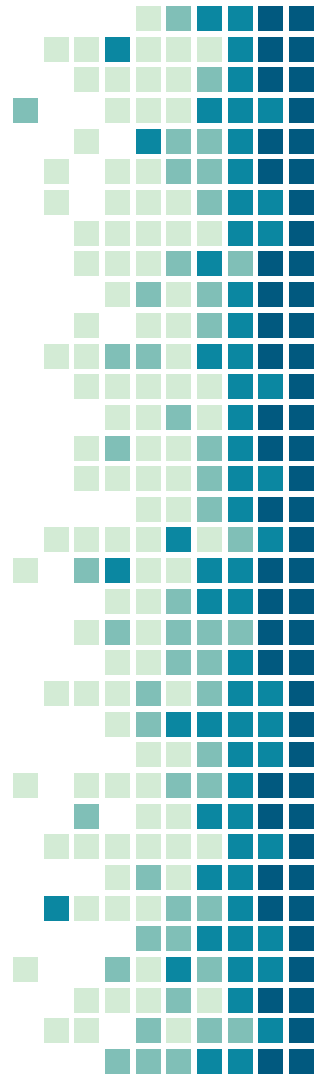
Technical Design

- Movement
 - Kinematic seek
 - Dynamic wander
 - Pattern movement



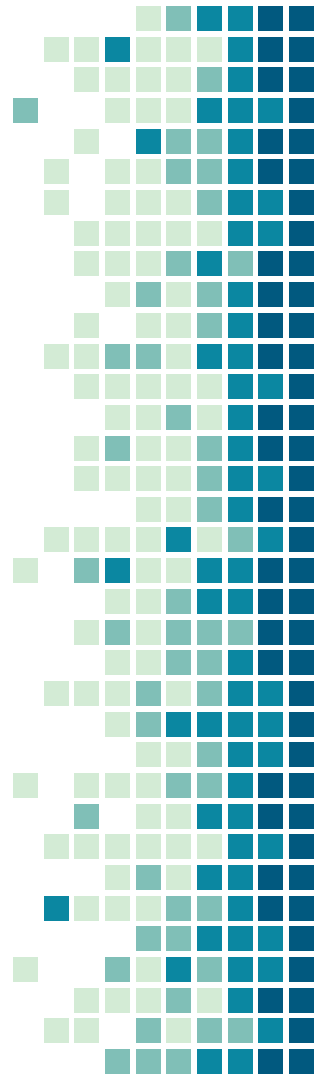
Technical Design

- Line of sight (all enemies)
 - Distance
 - Angle distance
 - Bresenham's line check
- Pathfinding
 - A* + Bresenham's line algorithm



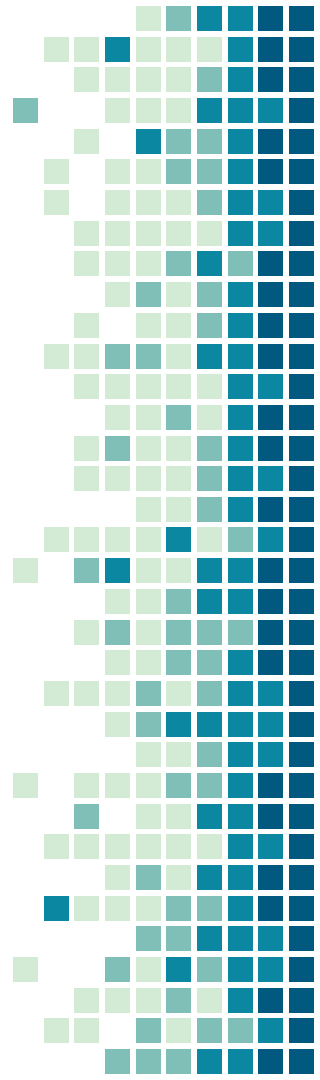
Technical Design

- Decision-making
 - Finite state machine
 - Boss (attack, avoid, attack faster)
 - Game (MainMenu, Gameplay, GameOver, Win, Tutorial)



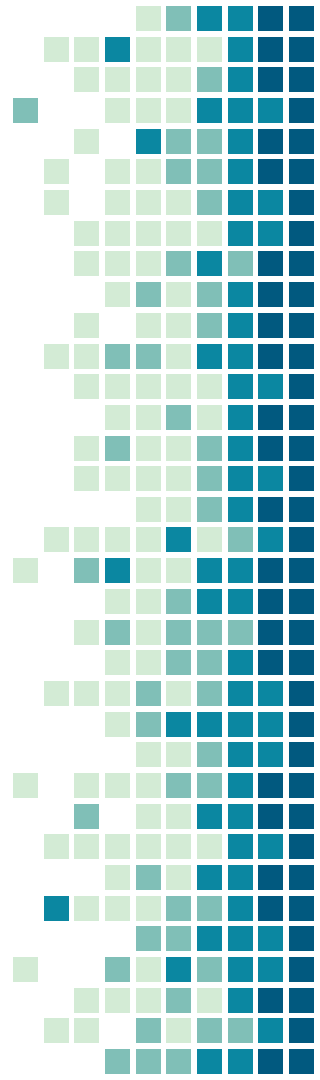
Cool Features

- Power Up
 - Change bullet pattern
- Sound Effect
 - When enemy and player firing



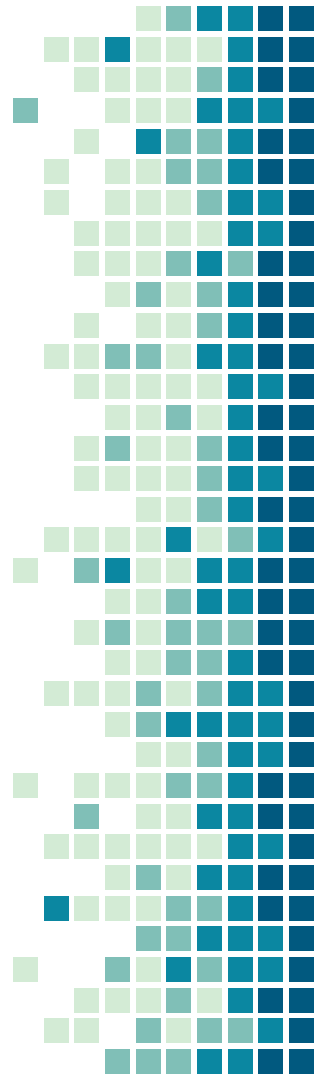
Cool Features

- Pattern Movement
 - Move along predefined points
- Challenging Boss
 - Dodge bullet
 - Attack faster when low health



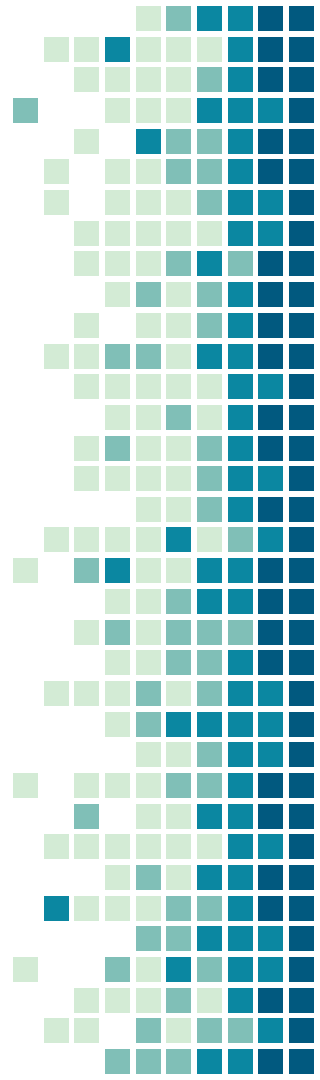
Changes to Original Plan

- Power Up
 - Added in Level 2
 - Change bullet pattern
- Tutorial
 - Teach player the input of the game



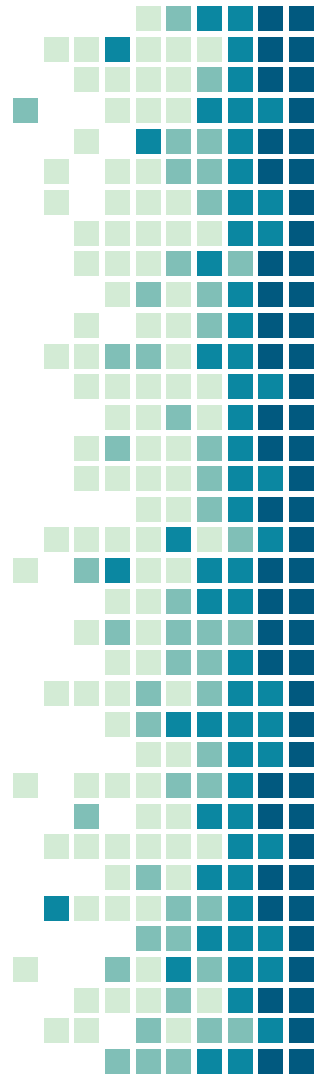
Changes to Original Plan

- Pause Scene
 - Pause the game
 - Can continue the game or quit game
- Player's health
 - Increase from 5 to 10



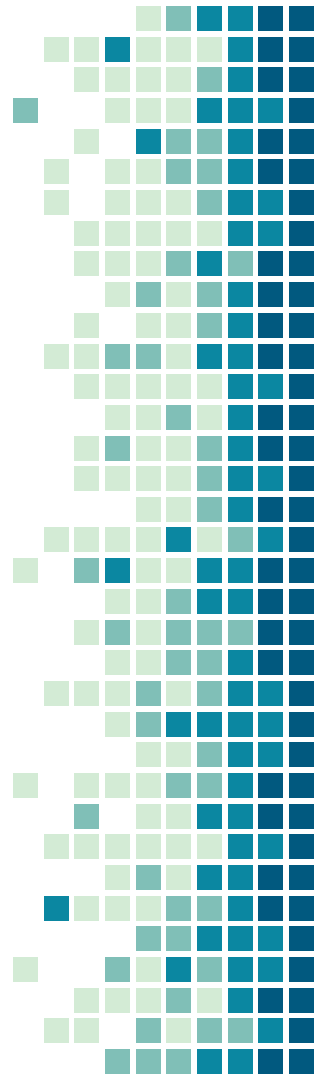
Changes to Original Plan

- Player's fire rate
 - Reduce from 150 to 300 (in milliseconds)
- Pathfinding
 - Original: too long to execute, game stutters temporarily
 - Enhanced: A* + Bresenham's line algorithm



If we had more time

- Collision between enemies
 - Currently, enemies' pathfinding do not avoid from colliding against other enemies



Thank you!

