Game Idea

Under Pressure is a simple 2D underwater mining game. The player uses a submarine to dive for resources underwater. Movement is simple and easy to understand. A fuel management system is also in play.

I have also implemented a shark that hunts you down as you play, if you kill it he gets stronger and more powerful.

An upgrade centre has also been added to upgrade the submarines fuel system and engine and armor.

You win by beating a highscore

Technical challenges

Drawing a laser was difficult as it involved a raycast and particle system

Shark behaviour and getting the shark to attack

What went right

Win by reaching the treasure and bringing it back

What went wrong

Collisions were hard to control and check what was being hit I eventually figured it out

Shark was rotating wrong when chasing player it was off by 90 degrees, fixed this by manually editing the picture 90 degrees.

Made the decision to remove the destructible blocks as they blocked the shark and this way I could have the shark follow you from the start

Shark was getting stuck I turned off colliders with walls

Had to use Boolean for if player was safe because the shark wasn’t changing targets otherwise

Things that went right

1. Shop and upgrade system worked well
2. Destroying rocks for resources
3. Creating a ui
4. Movement
5. Shark was good
6. Laser worked well
7. Getting the mouse to control the laser was difficult
8. Game screens

Features

* Fuel management and upgrade system
* Enemies attracted to you to avoid
* laser system for shooting enemies
* Health and Fuel UI

Controls

* WASD or Arrows to control sub up down and left and right
* Still deciding on shoot button and if gun follows mouse
* E to enter base of operations where you upgrade

Score is evaluated by treasure and time alive

Testing repos

Credits and References

Sounds

Buzz

<https://freesound.org/people/Ev-Dawg/sounds/337434/>

music

<https://freesound.org/people/Magmi.Soundtracks/sounds/478246/>

gui

<https://freesound.org/people/farpro/sounds/264762/>

win

https://freesound.org/people/LittleRobotSoundFactory/sounds/270545/

attack theme

https://freesound.org/people/Donkeyjohn/sounds/205997/

Rocksmash

https://freesound.org/people/magnuswaker/sounds/522099/

Hospital unedited asset

https://pngtree.com/freepng/hospital-building\_4842124.html

Island sand asset

https://favpng.com/png\_view/sand-texture-sprite-tile-based-video-game-cascading-style-sheets-png/YWUYk2iH#\_=\_

2D submarine asset

<https://www.pngegg.com/en/png-nudbr>

laser tutorial

https://www.youtube.com/watch?v=vdci2oxVaoA&ab\_channel=1MinuteUnity

rocks

https://opengameart.org/content/low-poly-rocks

speedometer/fuel gauge

<https://www.youtube.com/watch?v=3xSYkFdQiZ0&ab_channel=CodeMonkey>

underwater sprites

<https://craftpix.net/freebies/free-underwater-world-2d-game-objects/>

tutorial for digging

<https://www.youtube.com/watch?v=94KWSZBSxIA&ab_channel=MuddyWolfGames>

sharks

<https://www.deviantart.com/tfprime1114/art/Hungry-Shark-Squalicorax-PNG-809146102>

<https://www.deviantart.com/tfprime1114/art/Hungry-Shark-Bluntnose-Sixgill-Shark-PNG-813963732>

<https://www.deviantart.com/tfprime1114/art/Hungry-Shark-Great-White-Shark-PNG-809907222>

ai pathfinding using A\*

<https://www.youtube.com/watch?v=jvtFUfJ6CP8&ab_channel=Brackeys>+

cave background

https://favpng.com/png\_view/iceberg-black-hole-cave-illustration-png/yFLUzqFe#\_=\_

water tile

<https://www.deviantart.com/thecandyface/art/Water-tile-572916316>

pathfinding

<https://arongranberg.com/astar/>

background

<https://pixabay.com/illustrations/abstract-background-wallpaper-1779612/>

treasurechest

https://www.pinclipart.com/pindetail/iiToJo\_image-treasure-chest-png-club-penguin-wiki-closed/

shark enemy plan

The shark or sharks will hunt the player down throughout the level except for at the start

The longer you play the easier it is for it to get around the level

Can be killed but each time it dies will become faster and more aggressive

Sharks destroy hull and will cause game to end

Sharks death adds to score and a timer will start after a certain amount of time they respawn

Flashes red when lasered and flips on back to die

I may test in another scene first

------------------problems I run into and fixed

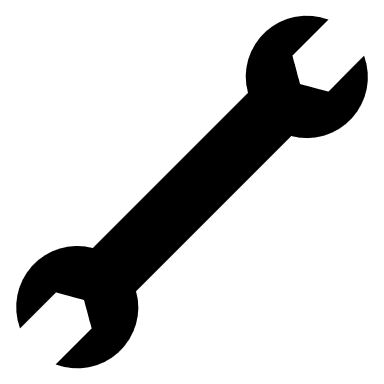
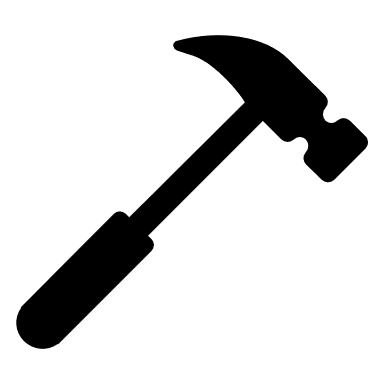
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--------to do list

1. Make shark jump back and strike again on collision(maybe changes targets once strike happens)
2. Add speed just before attack
3. Player dies
4. Get sounds
5. Make game more visually appealing
6. Make rocks respawn
7. Shop with upgradeable features
   1. Upgrade engine
   2. Armour
   3. Fuel tank+
8. Game over screen
9. Pause menu
10. Floating health bar on shark
11. Make shark turn around near shop

Polish

1. Upgrade laser so it grows
2. More background objects
3. Treasure chests in hidden spots
4. Start screen
5. Enter your name
6. Highscore
7. Player can drop explosive bombs

Remember tomorrow to activate debug log for script