Marwan Charafeddine

MMD: Final Project Logbook (Team Doug)

Date: October 25, 2024
Time Spent: 15 minutes
What I Worked On:
- Made a discord server and invited the team

Challenges:
n/a
Plans for the Next Session:
- Make Project Folder for all future materials, and Pitch Document within it on GDrive

Collaborators/Notes:
n/a

Date: October 27, 2024
Time Spent: 30 minutes
What I Worked On:
- Made a Project Folder for all future materials in GDrive to share with the team and collaborate, and Pitch Document within it
- Made my Logbook document

Challenges:
n/a
Plans for the Next Session:
- Team meeting to go over and complete the Pitch Document

Collaborators/Notes:
n/a

Date: October 28, 2024
Time Spent: 2 hours
What I Worked On:
- Team meeting
  - Pitch Document
  - Conceptualization

Challenges:
- Not everyone could make it

Plans for the Next Session:
- Debrief with rest of the team, team meeting

Collaborators/Notes:
n/a

Date: October 30, 2024
Time Spent: 30 minutes

What I Worked On:
- Discussion about the project, concept art(s), documents, and how to move forward for the class period

Challenges:
- Just Laura and I

Plans for the Next Session:
- Go over the project with the team in class

Collaborators/Notes:
n/a

Date: November 5, 2024
Time Spent: 1.5 hrs
What I Worked On:
- Team meeting/debriefing
- Worked on Player HUD screen overlay
- Created Main Menu and functionality
- Credits screen and functionality
- W_Credits, W_MainMenu, W_PlayerHUD
  - W_PlayerHUD not connected to anything yet
- Will work more on HUD tomorrow

Challenges:
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Plans for the Next Session:
- PlayerHUD programming

Collaborators/Notes:
n/a

Date: November 6, 2024
Time Spent: 1 hour
What I Worked On:
- Research for HUD variables
- Kept working on W_PlayerHUD
- Set bindings for HealthBar progress bar and AmmoCounter for the secondary limited heavy projectiles
- Need basic player variables to be setup before the HUD elements can connect, they need health and ammo variables to connect to
- I also don't want to input programming into the player blueprint right now because it's in another team member's folder hierarchy
  - ***Instructions for further HUD programming in the BP_Player***
  - Add HUD Logic to the Player Character Blueprint
  - In **BP_Player** Blueprint, in the Event Graph, add a node to create the HUD widget:
    - i. **Event BeginPlay → Create Widget** node.
    - ii. Set the Widget Class to **W_PlayerHUD**.
    - iii. Use **Add to Viewport** to display the HUD on the screen.

- - Add variables for **CurrentHealth**, **MaxHealth**, and **CurrentAmmo** in **BP_Player** and ensure that they are set as **public** so that the HUD can access them.
    - Update **Health** and **Ammo** in Real-Time
- Health Updates: Each time the player takes damage, update **CurrentHealth** in the player's script, and the health bar should reflect this change.
- Ammo Updates: Each time the player fires a secondary weapon, decrease **CurrentAmmo** and trigger the HUD to update.

Challenges:
- Can't connect HUD elements yet, tough to test functionality

Plans for the Next Session:
- Work together in class in engine

Collaborators/Notes:
n/a

Date: November 7, 2024
Time Spent: 3 hours
What I Worked On:
- Class team time
  - Started setting up gameplay test level
  - Went over art ideas for projectiles and enemies
  - Looked over blueprints

Challenges:
-

Plans for the Next Session:
- Start Pause Menu
- Continue building gameplay test level and electric eel enemy

Collaborators/Notes:
- Laura, Julio, Doug, & Eva

Date: November 10, 2024
Time Spent: 1.5 hours
What I Worked On:
- Went over teammate's BPs and assets to see how they worked and to see if I was able to connect any assets to my PlayerHUD widget (things like player health, ammo count, score)
  - Not sure on how to proceed here as we're still in a barebones state
- Created a pause menu widget
  - W_PauseShop
- Adjusted the prototype widgets created so far, 'skeletons' of the menus and UI are basically complete
  - Updated Trello
- 8 buttons (4 for light upgrades, 4 for heavy upgrades)
- And a Resume button, if necessary

- - Should function when pressed to unpause the game and remove the widget, W_PauseShop
    - Should be able to be implemented within player blueprints' pausing logic
  - Meeting with the team

Challenges:

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Plans for the Next Session:

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Collaborators/Notes:

Doug, Laura, Julio

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Date: November 11, 2024
Time Spent: 1 hour
What I Worked On:

- Modified widgets to fit the game's proper resolution as shown in Doug's test level, copied the bounds from the HUD integration he created that works in testing→ pausing works with testing too, needs to be connected by another programmer though
- Started trying to make an enemy BP
- Duplicated testlevel to my folder (MC_TestLevel2) so I could try to test an enemy BP, and also experiment with the pause menu/shop
- Not touching the character controller, but all that needs to be done is connecting the pause logic section and plugging in the W_PauseShop widget into the node, and it works pretty well
- Pushed these small changes

Challenges:

- Pretty stumped on simple stuff as usual, I just don't know what I'm doing when it comes to blueprinting mechanics or behaviors. Wish I did

Plans for the Next Session:

- Keep trying

Collaborators/Notes:

n/a

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Date: November 13, 2024
Time Spent: 3.5 hours
What I Worked On:

- Continued work on first fish enemy
- Got it to bounce around the screen like an old school DVD logo screensaver
- Got it to receive damage
- Spent a couple hours having a lot of trouble
- Met with Doug
  - Walked me through and helped explain building logic for Player seeking in this situation, and creating a Timer for tick damage during the overlap —> "biting" or "chomping" damage

Challenges:
- AI controllers, enemy behavior and movement are all blueprinting areas I consistently have trouble with and haven't learned enough

Plans for the Next Session:
- Meet with team in class tomorrow

Collaborators/Notes:
- Doug

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Date: November 14, 2024
Time Spent: 3 hrs in class
What I Worked On:
- Finished my FishEnemy1
- Zipped project files for records

Challenges:
- Making everything face the correct directions proved harder than normal
  - We figured it out

Plans for the Next Session:
- Start on next enemy, bring in more art when available for menus etc, change fonts for all text currently from my folder/section

Collaborators/Notes:
Doug and Laura

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Date: November 18, 2024
Time Spent: 3.5 hrs
What I Worked On:
- Work on Enemy 2 (crab with projectiles)
  - Created BP_AcidProjectile
  - Created BP_CrabEnemy
  - Added random movement and projectile spawning set by a timer
  - MoveSpeed, FireRate, RandomX, RandomY variables
- Meeting with team
  - Went over progress with Julio, Laura, and Doug
  - Doug helped me fix the boundaries issue, and get Enemy2 working more smoothly

Challenges:
- FIXED** Couldn't get the boundary bouncing to work like it was before when I prototyped the first enemy
  - In my M_TestLevel2 map, the player can move outside of the map boundaries for some reason, where it wasn't like that before
  - This may be why the bouncing isn't working as it was before
- Couldn't get the new BP_AcidProjectile to take damage or be destroyed by the player's weapon projectiles, this needs to be doable for the gameplay flow to make sense → player needs to be able to destroy everything somehow
  - DISCUSSED** Going to fix this later if this projectile turns into the Sea Urchin enemy concept

Plans for the Next Session:
- Meeting with team to debrief, tweak enemy 2 with help from other team members, upload art for Enemy 2 and hopefully other things (menus etc)

Collaborators/Notes:

Doug

Date: November 20, 2024
Time Spent: 1 hour
What I Worked On:
- Imported Main Menu art
- Formatted and added new art to the Main Menu widget
  - Adjusted title and buttons to fit the new art decently
- Added a placeholder hover sfx for buttons on W_MainMenu and W_Credits
- Adjusted text display a bit (added outline)
- Wrote up an explanation of BP_CrabEnemy and it's projectile with screenshots for Eva

Challenges:

N/A

Plans for the Next Session:
- Implement Font change, maybe more enemy work

Collaborators/Notes:

n/a

Date: November 21, 2024
Time Spent: 3 hours (classtime)
What I Worked On:
- Imported & implemented new UI and Menu art assets
  - Main Menu
  - Credits Screen
  - modified/implemented custom font as well
- Started and mostly built out logic for the new Electric Eel enemy
- Added new art from Julio (urchin, rocks, etc.)
  - Swapped out my "acid projectile" for the spiny urchin on BP_CrabEnemy
- Made a new duplicate map due to a bug on M_TestLevel2, using M_MCTestLevel now

Challenges:
- Need to figure out how to make the urchin projectile destructible, and shoot out spines/spikes in a radial pattern, similar to how the animation for the electric shock pulse works, but it will be programmed with individual spines coming out of the urchin projectile (if it is shot by the player)

Plans for the Next Session:
- More work on Electric Eel and BP_UrchinProjectile
- Will probably need to work within BP_CrabEnemy to build logic for the UrchinProjectile's destruction/explosion

Collaborators/Notes:
Doug, Laura

Date: December 4, 2024
Time Spent: 3 hrs
What I Worked On:
- More work on Electric Eel and BP_UrchinProjectile
  - Trying to build logic for the Eel to have a sin wave like movement, back and forth towards the bottom of the screen
  - Trying to add a Projectile Spawn Point within the "Acid" Projectile (which is the urchin sprite), so that we can spawn the Urchin Spines (BP_UrchinProjectile) as the BP_AcidProjectile is destroyed
  - Trouble on both of these logic blueprints
- Need to import art/flipbooks for Crab and Eel enemies, once available
- Team meeting
  - Fixed Eel movement behavior
  - Still need to fix damage issues with fish1 and Eel

Challenges:
- Trying to build logic for the Eel to have a sin wave like movement, back and forth towards the bottom of the screen
  - FIXED
- Trying to make BP_AcidProjectile destructible by player projectiles, Collisions seem to be set right, no interaction between player proj and the crab enemy's projectiles (the Urchin that we want to explode into spines)
- Trouble on both of these logic blueprints

Plans for the Next Session:
- Fix damage issues
- Work on Urchin Projectile

Collaborators/Notes:
n/a

Date: December 5, 2024
Time Spent: 3.5 hrs
What I Worked On:
- In Class work
  - Finalized and completed Crab, Eel, and Fish Swarm enemies movements/behaviors, collisions, and damage interactions
  - Imported and implemented Crab flipbook
  - Fixed original Crab projectile's logic to allow player's weapons to destroy it, followed by the urchin spine explosion interaction
  - Tested and implemented the spine explosion and fixed speeds
  - *All 3 enemies* (Eel, Crab, Fish Swarm) *could use further playtesting to optimize their health numbers for the best gameplay experience*
  - Debugging/playtesting

Challenges:
- Had to modify my previous enemies' interactions that stopped working since we started using a new collision channel for those interactions, figured it out
- Had trouble building out the logic for spawning spines properly from the Urchin projectiles' explosions – figured it out

Plans for the Next Session:
- *All 3 enemies* (Eel, Crab, Fish Swarm) *could use further playtesting to optimize their health numbers for the best gameplay experience*
  - Might replace Crab flipbook if we get another update on that
- Start working on a Spawner

Collaborators/Notes:
Doug, Laura

Date: December 7, 2024
Time Spent:
What I Worked On:
- Imported corrected Crab Animation and replaced the old one
- BP_CrabEnemy, BP_ElectricEel, and BP_MCFish1 are all ready to be used in gameplay, health can still be changed though
- Team Meeting

Challenges:
Plans for the Next Session:
Collaborators/Notes:

Date: December 8, 2024
Time Spent: 2 hrs
What I Worked On:
- Tutorial widget
  - Duplicated Gameplay Map --> M_MCGameplayLevel so that I could test tutorial widget functionality. Removes itself after 45 seconds and unpauses, or the player can press the START button in the widget to unpause the game and remove the widget--this begins the game. I blueprinted what I could within the widget itself, and then wrote some nodes within my Level Blueprint for M_MCGameplayLevel to test its functionality and it works well. Just will need to be blueprinted that same way in the final gameplay level
- Sound effects to search for (Pixabay.com, Freesound.org)
  - Underwater explosion(s) – for screen nuke, bombs, etc.
  - Underwater Ambience (background sfx)
  - Main Menu Music
  - Shield activate sound
  - Heal sound
  - Laser sound(s)

Challenges:
- Hunting for SFX can be tough

Plans for the Next Session:
- Meeting with the team
    - Go over SFX and Tutorial

Collaborators/Notes:
Doug (sfx)

Date: December 9, 2024
Time Spent: 1.5 hrs
What I Worked On:
- Team Meeting
    - Fixed up Tutorial widget to be more palatable
        - Made the widget a set of pages/instructions for the tutorial at the beginning with an array
    - Went over some SFX that I collected
    - Looked at boss animations with Laura
    - Went over spawner logic with Doug

Challenges:
- Array logic was a bit confusing, but I figured it out and we built the widget to have progressive visibility changes

Plans for the Next Session:
- Create a spawner for my 3 enemies (Crab, Eel, and Fish Swarm) following a similar model to Doug's
- Still need to figure out a way to have a sense of progression with the spawns, after I build a spawner
    - i.e. Score going up and past certain points will trigger certain spawners

Collaborators/Notes:
Laura, Doug, Julio

Date: December 11, 2024
Time Spent: 2 hrs (afternoon) 2 hours (evening meeting)
What I Worked On:
- Built out logic for a spawner for my 3 enemies
- They spawn at the properly denoted score point increments and locations, but the Crab and Fish1 enemies aren't moving, though the Eel does move down the screen as coded
- Some issues
    - Multiple eels spawn overlapping each other
    - Currently same issue with crab and fish since they don't move and spawn at the same locations, if there are multiple that spawn they will sit on top of each other
    - Tried bringing the spawns closer on the screen and they still don't move when they spawn

- - The Crab enemy's urchin projectile (named BP_AcidProjectile) isn't working when the enemy is spawned in, but works (explodes into needles) if the Crab is just placed in the level
  - Meeting with the team
    - Looked at and fixed my issues from earlier with the spawner
    - Changed Crab's movement, similar code to Doug's shrimp
    - Changed Fish enemy to a Paper Character blueprint type to get Character Movement, fixed some issues with spawner
    - Eel worked fine, but all spawned enemies were spawning with 1, fixed by changing the starting amount to 0
    - Inputted Credits in W_Credits

Challenges:
- Some issues to fix during the meeting later
  - Multiple eels spawn overlapping each other – FIXED
  - Currently same issue with crab and fish since they don't move and spawn at the same locations, if there are multiple that spawn they will sit on top of each other – FIXED
  - Tried bringing the spawns closer on the screen and they still don't move when they spawn – FIXED
  - The Crab enemy's urchin projectile (named BP_AcidProjectile) isn't working when the enemy is spawned in, but works (explodes into needles) if the Crab is just placed in the level – FIXED

Plans for the Next Session:
- **PLAY THE GAME IN CLASS**

Collaborators/Notes:
Doug, Laura, Julio, Zain

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Date: December 2, 2024
Time Spent: 45 mins
What I Worked On:
- Last minute changes tying up loose ends
- Fixed text on Main Menu buttons
- Added main menu art (title image)
- Altered my enemies' codes to include ammo and money drops
- Took out print string from spawner code
- Hid the shock collision for the Eel in game

Challenges:
Plans for the Next Session:
Collaborators/Notes:
Doug