23/11/2020

Project starts

Implemented a combo system that is based off time of last hit up to a max of 3 combos including air combo's

Sprites for attacking,moving,jumping and falling have been made.

I've also made useful functions using reusable delays which is new to me. The idea of this is to make sure if other functions call the reusable delays it won't screw with the Booleans such as gravity changing or input disables.

Summary:

Compared to previous projects Ive tried to have two different movement states those are general movement (walking, jumping, idle)

and attacking movement. The idea is to always have the option to disable general movement. This is helpful for such events as getting hit, attacking and I'm sure other things.

The retrigger able delays are also really good. This means that i can keep calling the same functions and expect the same outcomes compared to using normal delays.

As of now combo attacks, running, jumping, moving, falling and hurting flipbooks all work and function (without hitboxes).

29/11/2020

I apparently forgot to save my previous entries so this one is probably going to gloss over a lot

Changes:

Wall sliding is added into the game and works very well

Input queuing can be implemented into the game at some point and hopefully not screw it up

Bow animations have been added and working

Roll iframes as well as animations are added and working. I want to change the iframes so they don't last the entire roll duration

A general platform class has been made that most objects will inherit from. This will make sure that everything can be wall jumped off

Spell casting animation with a constant cast animation past 0.5 seconds have been implemented. Casting works as long as the cast button is held down. When it's no longer held down it calls the cancel attack function.

Crouching is also implemented with the size of the characters hitbox decreasing with crouched. Crouching can't be used midair. Fixes for crouching will being hit have also been added. The camera is wonky when crouching.

Fixed a bug where you could jump out of animations

Fixed issue where bow gravity would affect rolls gravity

Summary:

I'm almost at the stage where i want to start working on the gameplay class. I think my next action will be to make sure that animations are going to work properly in that class.

1/12/2020

Changes:

Added in second spell cast. This is pretty much just a copy and paste of the first spell cast but instead uses a spell cast 2 flipbooks to differentiate the two.

Added in semi solid platforms. The semi solid platforms went extremely well due to the crouching making the hitbox smaller so it no longer hits the detection for the on-platform box.

2/12/2020

Changes:

First, I have semi fixed the issue with the camera bobbing to much when crouching. The current new problem is spamming the down button will not enter into crouch. I don't think this will be bad for anything if it goes unfixed.

Started working on enemy ai. I've done this using blackboard and ai controllers. At the moment when the enemy looks at the player it will run towards them. If they aren't looking at the player they will randomly move. The engine handles most movement automatically using navigation meshes. From here on the scale of the Y axis on objects needs to be bigger.

With this new change I have also started on the enemy base class. This class at the moment very much works like the player class.

Changed the semisolid class to maybe work with the general enemy class. It's essentially copy and pasted code that the player used. I do want to add a function that the enemy can call to just change the platform to ignore the enemy at some point.

Fixed issue with infinite rolling and iframe changes.

3/12/2020

Changes:

I've spent a lot of time today learning about blackboards. I have a good understanding with how they work now and I'm confident in getting them to work. Only problem is I'm not entirely too sure how I'm going to actually set flipbooks without coding two times and then I would imagine syncing issues.

I've also made a nav link. The idea of the nav links is to have navigation on a vertical axis. The current issue with this navigation link is that the ai automatically jumps on these pads and doesn't jump when it needs to.

4/12/2020

Changes:

I've been changing around the enemy ai to work a little and i feel like it does work a little bit better now.

However, the biggest problem with the ai is the nav links. Right now, these nav links sometimes work and other times don't which is extremely frustrating and I have 0 clue as to why this is happening.

I have also added another function the ai and it's the ability to jump down semisolids if it detects that the player is on a lower z axis.

There was also an issue where the ai couldn't track the very edges of sprites I have since fixed this.

Summary:

I think the next week or even two weeks will be spent getting this ai working and nav links especially. The movement is also very wonky with the jump pads not actually rotating the enemy so they jump backwards.

8/12/2020

Fixed issue where the enemy would jump through semisolids while jumping onto them. Also added it to a service instead so it can be reused.

9/12/2020

Changed the chase ai from simple move to ai move to and then use the player pawn as a target. The movement is a lot more fluid now.

Changed the launch from nav links to include an ai stop navigation. I'm hoping that this will make sure that the NavLinks are more consistent where the enemy moves.

Implemented the attack ai. Currently the ai won't rotate or do anything that involves the blackboard once the player goes into range. This is fine but I might add rotation on a later date.

10/12/2020

Added rotation to the enemy when attacking.

15/12/2020

Fixed issue where player couldn't start wall sliding. I'm not sure as to why this broke but it did.

Started working on a new flying enemy bat. This has been a big undertaking making a new ai. Currently the ai works decent with tracking the player. However, I have yet to get its random movement to work.

16/12/2020

Continued work on the flying ai. The ai can now roam in a semi decent state. The roaming tries to make sure that the enemy is in air.

Next is working on its attack.

17/12/2020

Started working on player hitboxes when they attack. Currently it works just by every hitbox being a child to a hitbox that manages everything.

20/01/2021

It's been a while since I've worked on this project partly due to how much i don't like the enemies ai and been unable to make it better. Regardless I've come back to do some more work and will just put the enemies behind me for a but or dumb them down a lot.

I've worked on the hitboxes and for the most part finished all the attack hitboxes.

With this I have changed the way the hitboxes spawn in. Now the hitboxes will spawn in before the attack animation ends so it seems more genuine. This is easily modifiable inside the attack animation's function.

Doing this I had to create 2 new timelines in the disable input function which brings it up to a total of 3. The extra 2 timelines handle only attack animations and attack hitboxes. The previous first timeline will handle anything that isn't an attack.

I'm currently satisfied with how all the attack animations/hitboxes work so i don't think further work needs to be done.

I think my next goal is to rework the enemies and dumb them down a little so they work in certain areas and not everywhere.

22/01/2021

I've started working on projectiles for the bow.

At this point I'm really just avoiding working on the enemy I will do it at some point trust me.

25/01/2021

Finished off the bow creation.

The arrows use a particle system as well which is new to me. This works out very well and the arrow effect looks very nice.

I've also started adding more stuff to the enemy including an attack delay and started working on player hitting interactions.

The attack delay is pretty straight forward the enemy will (hopefully) attack 1 time then will have a delay that can be set before it will attack again.

The interactions with player attacks are still very early in work but it's coming along and shouldn't be too hard.

I have also Kinda of started working on an aerial dodge. Currently there are many problems that need to be addressed.

28/01/2021

Apparently, there was an issue where animations from rolls/aerial dodges wouldn't play out in full when doing another animation. That has been fixed.

There was also another problem with air attack 3 that ruined velocity and gravity that is now fixed.

Started work on hitbox determinations.

Changed arrow firing to game mode blueprint.

I broke the arrow. It doesn't work anymore.

29/01/2021

Fixed the arrows. I made the arrow into the child of a general projectile class this might help later down the line.

Hitboxes are working and being determined correctly.

5/02/2021

I've been hard at work on the enemy class and making it more functional.

First change the enemy no longer rotates to the player whilst attacking. Instead, it will attack and just face that direction until it has finished.

Second the enemy will also no longer be launchable when its attacking this makes sure that the player can't just continuously knockback the enemy without any strategy.

Third I've made the launch a generic function now so every enemy class can change and I'm going to put every type of launch into a component so it's easily accessible.

Fourth I have found a big problem with the hit result when dealing with base attack hitboxes from the player not projectiles. The hit result wouldn't spit out any results because the hitbox spawned directly inside the enemy. I have come up with a solution that seems to be able to tell where the enemy was hit from however this still needs to be further tested.

This new change to hit results means that the player hitbox class will need to call the enemy blueprint.

7/02/2021

The enemy's functionality is improved a little more.

New additions include separation between attack animation end and call for if the player is inside the enemy attack box. This makes it so the enemy calls for the player to be hurt earlier then the animation finishes.

The enemy now also has health that is functioning correctly.

When the enemy takes damage, it flashes red briefly as well.

There is also an enemy dead function that works perfectly fine.

Knockback has been adjusted to include knockback modifiers from the player attacks which has been changed from strings to float values.

14/02/2021

Made it so enemy's attack now calls to player being hurt.

The player being hurt function now makes the enemies freeze in place for duration of hurt flipbook plus a little more.

The enemy also currently calls the damaged function when you enter the body hitbox. However, I don't like this so i think giving every enemy an attack instead would be better.

Added an attack to the bat. It now fires a projectile out when the player is close stopping all of its movement as well. Currently the projectile doesn't work.

16/02/2021

The projectile from the bat now works pretty well it shoot towards the player with a variable to change the speed.

I have also removed the hitboxes from the main bodies of enemies so the player can walk into them at all times. This may need to be monitored.

I have made it so when the player hits an enemy it sets their player in sight bool to true so they will go towards the player. Only downside to this is it won't unset itself till they reach the player and the player leaves the sight range again. This may also need to be monitored.

Added more sprites for new enemies to the game. Going to start working on the first boss.

17/02/2021

Changed out the blinking sprite when the enemy is hit to a blood gush.

18/02/2021

Changed the jumping so the player holds down how long they want to jump for. The after effect of this is the player now goes up slower but it still functions fine.

I also fixed a bug where the player could jump whilst clicking attack and it would launch them high up. This isn't from the previous change it has always been here.

Work has also started on the first Golem boss. I expect this to take quite a while to finish. With this im also considering adding a block feature to the player but that will come later.

20/02/2021

Slowly building up the first boss.

Currently I have made a way to randomize what attacks the enemy will do. The attacks it chooses are completely random and don't correlate to anything. This is fine if I need attacks to trigger at a certain hp threshold it can still be done.

25/02/2021

I have kind of made the first attack of the golem. It can spawn a hitbox on its fist just via spawning new actor and telling it to move to the left or right.

With this I have also started on making a new blackboard table/ai for the golem. I have created a few new functions some of which dont work.

For starters the chase function. This isn't the same chase as the enemy this ones different. The boss will try and make its way to the player on just the x axis if it makes it to the player it will go to the next sequence if not then after a set amount of time it will go to the next sequence anyway.

Currently for working ai thats all I have. I've made attack functions but they don't seem to be working properly.

1/03/2021

I think I have fixed the problem with the ai not 100% sure still needs more testing but it seems fine.

I have also started working on the second attack shooting the arm off. The arm flies off perfectly fine but it doesn't stop when it hits a wall so I still need to address that.

3/03/2021

I have improved on the arm.

First off it now will change its sprite color to red slowly to indicate its going to blow up once its at a certain point of red the idea is to spawn a explosion actor for a hitbox.

Previously there was a problem where the projectile was going through everything. This has been resolved by not having a default scene root.

I have improved on the shooting of the arm. Previously it would shoot in a straight line at the player so in theory it could only ever go to 2 locations. Now it will fire at the player and rotate to them before firing. This is much better.

5/03/2021

Kind of started to work on pillars for the punch attack. The pillars all spawn in equally appart at the same time which isn't desired but as writing this a delay will fix that. There is also the problem of the pillars spawning in 1 dirrection.

9/03/2021

Have been doing work on this pillar its harder then expected and most of my efforts have left to failure so I thought no reason to include failure here without an success.

The pillar was originally just going to be a cone object with a rock material that has now changed to a flipbook. This flipbook has collision which i never knew was possible but should be used very sparingly.

So the pillar kind of works now I just have to adjust the time at which they spawn in and where they spawn in now.

Also last log I said i had a way to change the spawn time that doesn't work. The loop fires off 4 times in a row without care if the code has finished so the delay would have 0 effect.

There was also apparently a problem with the boss chase function. If it tried to chase 2 times it wouldnt work. This has been fixed now by changing the chase bool to false on execution. To me this doesn't make sense but its working now.

Fixed problem where pillars don't spawn in right direction.

13/03/2021

I have basically finished up with the pillars and have started working on the laser attack.

So far i'm not a fan with how its made but i'm unsure of a way to make it better. Currently the actor rotates and moves itself along the x and z axis to try and stay around the head area of the golem making it look a little wonky and making it hard to rotate past a certain point.

Past that a new bug has arised or was already there. The arm shooting is now extremely slow if your close to fast if your to far. This needs to be addressed not sure how to fix it.

I also fixed a problem with the punch hitbox activating to early. At some point it wouldn't hurt to change the code so the hitbox just activates inside the bossgolem blueprint.

09/04/2021

It's been a while school has started and has been a pain in the ass and to be honest i really lost it with this project.

When I left off I was working out the golem laser. I've finished this now with a pretty cool way of doing it.

I use a sphere to that spawns on the golems head location then in an event tick always have the actor be in the location of the sphere when it was initial spawned so there is no displacement between the head when rotating upwards.

I'm not sure as to what i'm going to do next there is still work needed to be done on the golem different attack times and whatnot still need to be worked out.

11/04/2021

I did a lot today so some of it probably won't be logged cause of bad memory.

First I noticed a problem with the time dilation and did some research turns out setting custom time dilation doesn't effect delays at all but it effects timelines so I switched some of the boss golems delays to timelines instead.

I dont think the other 2 enemies will have to many problems with this but it remains to be seen.

For the boss golem i added an explosion effect to the end of the arm shoot attack so that is now complete.

I have also changed around the behavior tree because it was using delays so there was also a problem there.

The behavior tree right now works very well with the new changes probably better then before. Now there is a bool that says to wait if the normal boss golem blueprint says to. This bool is tied to attack delays but can also be used for other things.

I've also moved some of the players been hit code to the gamemode blueprint. There was also a fix done to the player been hit function. It now loops to see if the player is in the hit animation when it should be. Previously there were times where you could skip the animation it shouldn't be possible anymore.

I think my next plan is to implement in its ability when its hp is bellow a certain amount what that ability is i have no clue.

Added hitbox to the golem arm shot attack. The hitbox becomes unactive when its still.

Added bricks flying out when the boss is attacked.

Added own seperate Boss Knockback function. Bosses can be knocked back now of course setting their base knockback to low is kinda what needs to happen.

12/04/2021

I've changed around the knockback multiplier on the players attacks. I have changed them from float values to vectors and changed it to work in all the enemy classes. Having a vector means I can have more control over the directions in which attacks knockback.

Started and finished the boss golem ability. The ability spawns two rocks that bounce off walls then get destroyed after a few seconds.

With that finished I feel like the boss golem is pretty much finished excluding the bug with the arm velocity which im still looking into.

I have started also working on the HUD.

Right now I have made a health outline and gradient that works. It goes up and down perfectly normal and works well.

The HUD works by creating a main HUD then that creates all the other widgets and manages them.

I have also made the mana outline/gradient however I haven't got all the functions setup to remove/add mana. I'm still working out ways for this shouldn't be to hard.

13/04/2021

Not much progress was made today was doing unity stuff.

I decided to change up the health icon it just looked a little to big and in your face. So I looked at a video and made a very easy circular wheel.

I think this new health design looks much better and putting the mana diamond in the middle makes it look nice. The mana flower can be a little hard to see so maybe something behind the hp hud could be considered.

It also turns more red as hp gets lower.

I have also changed up the flower it no longer looks like a diamond just due to bad gradient.

Instead it now uses an unreal engine diamond gradient which makes it look more like a circle but it also has a consistant percentage now.

The hud is very compact now only taking up a circle of space.

The next goal is starting to make some of the abilites. I might start on the dash player ability or maybe a lightning circle just so I can start working on debuffs before to many enemies are made.

14/04/2021

Been working hard on making the first player ability and for the most part it is complete.

The dash ability gets all enemies nearby the player it then stores them in an array and removes them if the player isnt facing them.

It then adds the difference in the z axis and x axis to determine where the player should warp to.

It then sets the actor location at the determined closest enemy. I also made a shadow the follow the player when warping. Currently it gets the players current flipbook however if im just using a slide animation whenever the player dashes then its probably easier to just set it to a static always using the slide sprite.

I think i want to make sure that the shadows are spawning a good distances apart at some point but not now.

The next thing to do is make HUD elements to represent the dash and have a cooldown. This will be hard because its going to involve setting up a lot of different gamemode things to determine ability use.

18/04/2021

There are a few things that were done today in regaurds to abilities i will probably miss a few things.

First there is a new function in gamemode that checks what ability the player users with the data table. The data table also contains icons, name, time to cast and cooldown.

With this i do also need to make some kind of check to see if the player has fufilled the time to cast condition and also a mana cost condition but that is still to come.

I have also made the HUD for the different abilities. Right now each ability HUD updates using the event tick and casting to the gamemode and then it checks for its array element with a for loop. This seems extremely expensive in terms of performance cost because its 4x casts and loops each event tick. Also the gamemode event tick controls the cooldowns for abilties.

There are still a few more things to do to make all of this works but should be done soon.

22/04/2021

Been busy with school work and this log isn't just this one day because i've been working on this project really late and haven't had time to log.

So everything to do with the HUD ability stuff cooldown and icons works very well. I made a new radial for the cooldown that is exactly the same as the health one and it looks real good.

I have also made some functions that for the ability use that make it work. Truthly I should detail what each of these functions do cause its going to get confusing at some point.

CanPlayerCastAbility:

This function checks if the player has enough mana and if the ability is on cooldown via array index.

SeeIfAbilityNeedsCastTime:

This checks to see if the ability needs time to cast. It gives back a float value of how long it will take to cast and a flipbook that it will use when casting. This function hasn't been used yet cause there are no abilities with cast times as of now.

UseAbility:

This functions main purpose is to use a switch that will activate the correct ability function.

I have also started working on the players second ability which aims to launch the player up and perform slashes all around them in a circular motion like links up b. The ability does cost mana however I did also have the idea of having abilities like that being tied to a max use this many times per stage thing instead of mana. In the future if i decided I want to do that this ability will probably implement it.

The player can now hit the box golem ability rocks and destroy it.

The RisingSpiral is now finished which is the players second ability previously mentioned. I did make some adjustments to the attackhitboxparent class that involves adding a constant call to attack enemy. This is for this attack in particular so it doesnt just it one time. The attack spawns 2 hitboxes both diagonally on the player and launches the player up with 0 gravity.

I also added a new function with risingspiral and its to disable the ability to use abilities for a set amount of time. This action came about because you could using rising spiral and dash at the same time.

I have made the next ability called Spinning Disk. It throws a disk forward and thats about it. It has a cast time which is why i wanted to make it. I added in a ability index variable to the disable input function in the player blueprint that i use for other animation completion things. It then goes to determine animation and see's if the animation is called cast.

27/04/2021

I've changed how abilities with cast time work. It now goes to its own seperate function instead of the same ones other animations use. It does this so its easier to use the cast loop flipbook.

I have also made a heal ability. It was pretty simple but its another cast flipbook ability.

I want to see if i can make a spirit ability now. This might take a little bit longer.

I have started working on a tornado effect. It's very early but it seems to be working as intended. A side effect of having this is turning off collision between enemies this is due to them changing y axis because they all get sucked into the same spot.

12/05/2021

Its been a while im at the final weeks of the first trimester so there is a lot of work and its draining as all hell.

So previously I was working on a tornado. There has been on progress on this instead i've been working on a block ability.

The plan with the block ability is to replace the bow. The block will only work if the player is facing the attacked direction. Currently the way i have solved the direction of enemy attacks is by using the enemy forward vector. From what I can see all current enemy attacks work with forward vectors however the bat attack doesnt work I need to address this at some point.

13/05/2021

I have created a counter for the block. The block has the first 4 frames as blocking frames then the next 3 frames will punish the player.

The block works by clicking left click when the player successfully blocks. There is also a sprite indicator when the player can counter.

The counter spawns a few shadows then spawns a hitbox after.

The next thing i want to work on is either the tornado or try my hand at a new enemy make it better then the last.

14/05/2021

So I decided to start working on the second boss. I havent started doing very much just planning it out and also made a function that will time delays that delays for x frames.

The first attack will be a downward slash that will go forward from hit direction.

The second attack is a sideways slash that will have a large sideway hitbox that wont move forward like attack 1.

The bosses skill not ability flip flops between 2 skills using the same animation.

The first skill will summon 2 spirits that will try and jump at the player unsure if i want these to explode once they jump or if they will just harm the player when to close.

The second skill will cast fury. Fury is something I plan to have for a lot of enemies when the enemy collides with the player it will do damage.

The ability for the boss is a combination between attack 1 and attack 2 making for an attack that has an impossible to dodge on ground and will force an air dodge.

For this boss im also going to create a hitbox class that enemies will start using much like player hitboxes for attacks. This should of been implemented at the begining.

20/05/2021

Uni is starting up again soon so i'm yet again going on a hiatus.

Currently the boss is almost done there are a few issues with what seem to be the timelines where the attacks go out and dsync with the hitboxes

Also I need to have a way for the fury class to know when to not attach itself to an actor because when the boss is meant to be invisible the aura can still be seen

22/08/2021

I've chosen to do this project for my uni work so i'm going to be adding in the player menu for that.

Currently I have a bit of the menu done already mainly the side bars that display the menu options as well as their animations

Idea's:

Randomly generated levels using segments and pasting them together.

Remove bow and turn it into many abilities

Known issues:

Bug where player is crouched and tries to roll off edge it will just stay on the edge.

Camera changes when player crouches and Un crouches. Solved: I used a timeline to fix this. It looks better than before but could still be improved.

Player can infinitely roll. Solved: This has been fixed by having it so if the players flipbook is roll it won't work. I've also changed the iframes so its half of the flipbook's duration (0.5 seconds so iframe lasts for 0.25 seconds).

Bat seems to sometimes stay as a red sprite when changing colors. Not sure what causes this. Solved: Kinda solved by removing it and adding a blood gush instead.

BossGolem arm shooting is extremely slow if to close or to fast if to far. This also applies to the bat projectile so its a problem with the math im doing.

Bossgolem punch hitbox should probably be spawned with a delay in the bossgolem blueprint not activated in its own blueprint

Spamming jump while running at a wall will cause very high upward velocity wall needs to be able to be climbed. Solved: Overriding velocity seems to have fixed it and putting stop jump inside the onwall function.

Not a issue but I need to make sure the bat projectile has a forward vector that works with the block ability.

BossGolem arm attack hitbox goes out frame 1 instead of when it actually punches