

ASSUMPTIONS I MADE:

The reference images should all be from the same video as the character. (all the objects were gathered from Cal Kestis Animation 1)

The 2 references are meant to be of the same character and objects (to get other angles and lightings)

The timing charts are of the important motions and not every small motion in the 2min+ videos

Reference footage was of both gameplay and cutscenes because the instructions did not specify

I could not get exact frame of motions for the timing chart because the video-png sequencers I found were all garbage and either offered too low a framerate to be useful or put the pngs out of sequence for some unknowable reason. I will try and install a better PNG sequencer when I have my new laptop set up and am not borrowing one.

Estimating frames where applicable assuming 30FPS

Because I didn't have access to my own laptop at the time of doing this portion of the assignment, the video references were all found on youtube meaning I don't know exactly when inputs are pressed or control over what details they focused on during recording.

Timing chart length based on full video length

Ori and the Blind Forest menu

Parts that caught my attention

- I really like how the text flows, and the particles come off it. Makes it feel like a flame, or alive.
- I like the bubbles for the save files and how they move. I find the rotating bubble carousel very aesthetically pleasing.

What does and doesn't work

- I think the contrast between the blue save files and the sunset red background works nicely
- The particle effects are really nice
- I don't think the title being in the same color as the background was a good idea. It makes it harder to see.
- I think the button movements are nice, the smooth rotation is very engaging.
- Everything is very smooth and flowy

What makes it interesting:

- Same as what caught my attention

Important animation techniques:

- ARCS! The objects move on an arc in and out of focus.

Static and dynamic components:

static

- The text buttons are static. They let the player know what the buttons do

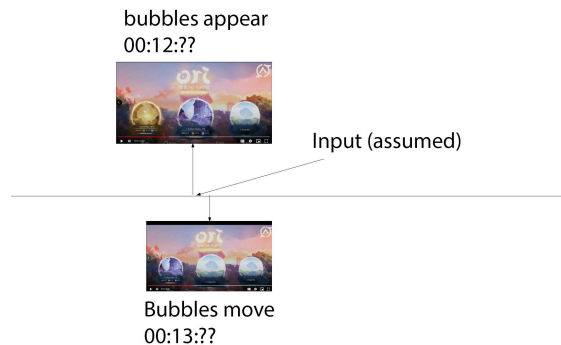
Dynamic

- Title. The title has a ripple effect and particles that move off it. I believe it is a 2d asset but this doesn't really affect the movement because it's likely just an effect layer on top
- The save files. The save files move in and out, like a carousel, as the player selects which save they want. These are likely 3d assets which would affect how they move as they appear to get closer to the screen. The states are either in the background or the foreground. With another state for difficulty, select if it's a new save rather than an old save. These only move when the player hits the button for forward or back select.

There are no characters

Timing:

The motion is very fast and seems to happen immediately after the input is pressed.



Animation concepts:

- The save select carousel is likely using a spline to create the curved motion that follows an exact shape every time.
- The math is likely lerping the object along the spline by a set increment and speed.

Usability and engagement

- I think the animations make the main menu feel more alive and whimsical which is what the game should feel like
- I think they draw attention to the right details and don't really distract from anything important.

No characters to speak of for the technical portion

Mario party 9 main menu

Initial thoughts:

- I like how energetic it is. Draws you right in
- I think the starburst lighting in their back is a bit much
- I like how the start button bounces up and down
- Everything is quite smooth
- This menu actually has a character in it which not many did

Important animation techniques

- Exaggeration, timing and arcs. Mario falls in and does a very dramatic motion very quickly, the motion follows arcs. This all creates a very natural, high energy animation to catch your attention.

Dynamic and static objects:

- There are no static objects in this animation. Everything moves in some way

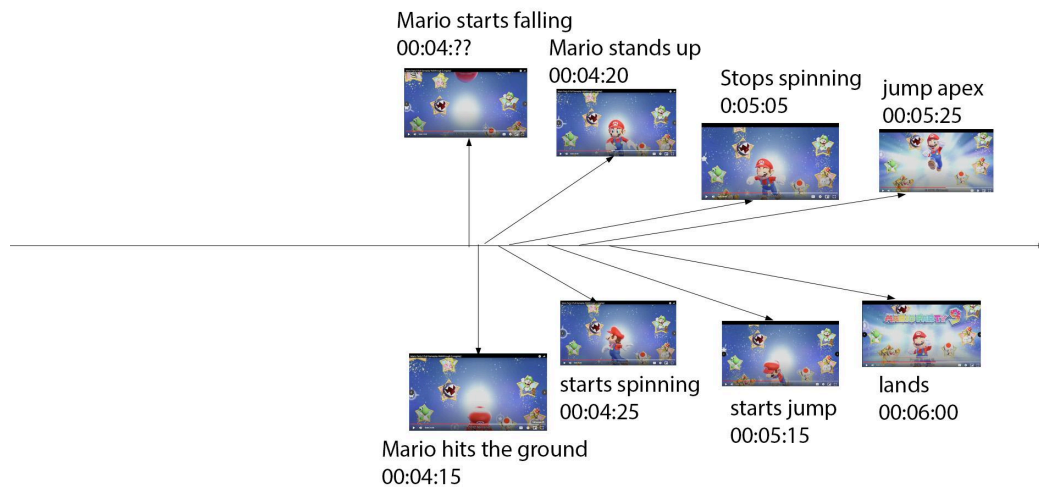
Dynamic

- The stars that move from the bottom of the screen to the top. They float with slight left and right motion. I believe it is just transformation based as I don't see any exact repeats and the starting position seems randomized. The assets are probably 2d but this should affect the motion since it just uses x,y coordinates. The only state is constantly floating.
- The play button. Bounces up and down while waiting for the player to interact. Its states are likely up and down. The motion is probably just keyframed. The action is quick and repeats every few seconds. The asset is likely 2D which will factor into how the motion is done as it appears to get closer to the screen which is more difficult with 2D assets.

Characters

- Mario is the only character in the scene. His model appears to be very basic, likely only 10-20 bones depending on whether or not the fingers can be moved independently .
- There is no terrain or objects to interact with
- The movement does feel fairly natural if a little exaggerated.

Timing



Core animation concepts

- The floating stars are likely lerp to move them up. Mario's actions are definitely keyframed because they are identical every time with no variation. The math for lerping stars wouldn't need to be anything special, just the standard motion equations taking a position from the bottom and moving it up on the y.

Usability and engagement

- I think the screen is a little bit too busy, all the background animations distract from the start button. I think the mario animation is really fun and adds a lot of energy to the game and makes you feel excited to open it and makes you anticipate equally high energy gameplay

Celeste Main menu

Initial thoughts:

- Extremely simple
- Feels almost sad and distant
- Almost sets a goal by saying "here is the top of the mountain, good luck"
- There isn't much to discuss in terms of motion or smoothness
- The scene makes very good use of staging and arcs. The motion around the mountain follows an arc and the camera is centered on the mountain filling the scene well

Static vs dynamic

Static

- The text buttons. They just sit there and wait to be pressed

Dynamic

- The camera. The camera rotates slowly and smoothly around the camera at a constant rate. This never changes states. The camera likely is moving along a path at a set speed. It is definitely 3d to get the effect. This only proves further that it's using pathing over something like a lerp.
- The climb text flashes colors. It always does this to draw attention. There is no motion

No characters.

Timing:

- There isn't really anything to make a timing chart with. The motion is constant and circular, following the same path at the same speed. The path is a circle so it always repeats without a clear beginning and end.

Core animation concepts:

- The main animation technique being used is pathing to get the camera to follow that circular path around the mountain model.

Usability

- I really like the simplicity of it. The very plain and desolate feeling mountain draws attention just long enough to set the tone before the player hits the start button. I think this enhances the menu quite nicely

Cal Kestis Animation 1

The parts that caught my attention:

- How expressive Cal is
- How lively BD1 is
- His hair actually flows
- The camera moves, it isn't static
- It transitions smoothly back into gameplay

What works and what doesn't?

- I think most of the elements work very well

What makes it interesting to me?

- I like how the two characters interact
- I like how it establishes the personality of BD-1 very quickly

- Both characters are made very expressive

Animation principles

- Exaggeration is the most important principle being used in this animation because they have to get the emotions of both characters across very easily and accurately, and BD-1 is a robot making exaggeration even more important to making these things clear.
- The scene uses staging really well to set up the transition to and from game play both when the animation starts and ends. This makes for very smooth transitions between gameplay and animation. This also makes for a well composed scene that gives both Cal and BD-1 enough space to do their things while the camera can focus on them individually.

Static and dynamic components:

Static

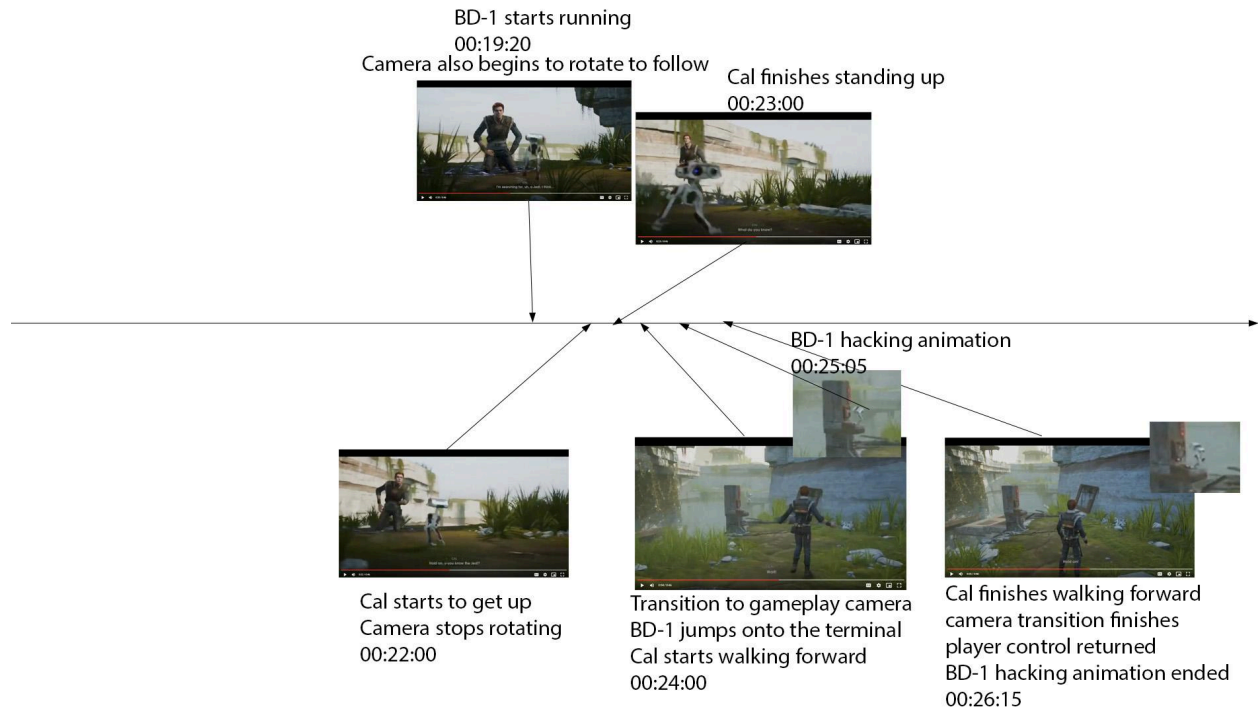
- Rocks (background element)
- wires(connects to the machines)
- scrap(provides atmosphere and world building)

Dynamic

- BD-1 is a 3D animated asset that automatically ran to the terminal and began to slice(hack) it. It appears to be a keyframed animation as BD-1 follows a specific path to climb the terminal and start hacking it. During the actual cutscene all his movements were clearly keyframed. It is a 3d asset, this does factor into BD-1s motion because he climbs up and around things. BD-1 moves when near things he can open, he moves fast and usually straight to the target. The states of BD-1 are following the player ,Idle, running to intractable, waiting for input and activating interactable
- The grass is a dynamic asset that seems to follow a key frame to sway slightly to create the illusion of a breeze. These are likely 2d sprites to save space. This doesn't affect their motion. The only state is swaying.

Characters

- Cal. I don't know how to predict the number of bones used for Cal but he seems to have bones for head, neck, shoulders, upper and lower arm, fingers, hips, upper and lower legs, and two foot bones. So maybe around 50? Yes the character does adhere to the plane they are walking on. The character does not interact with anything in this scene. The movements are very fluid and posture shifts as he speaks.
- BD-1 seems to have 14 ish bones. neck, ears, body, upper and lower legs, and two in the feet



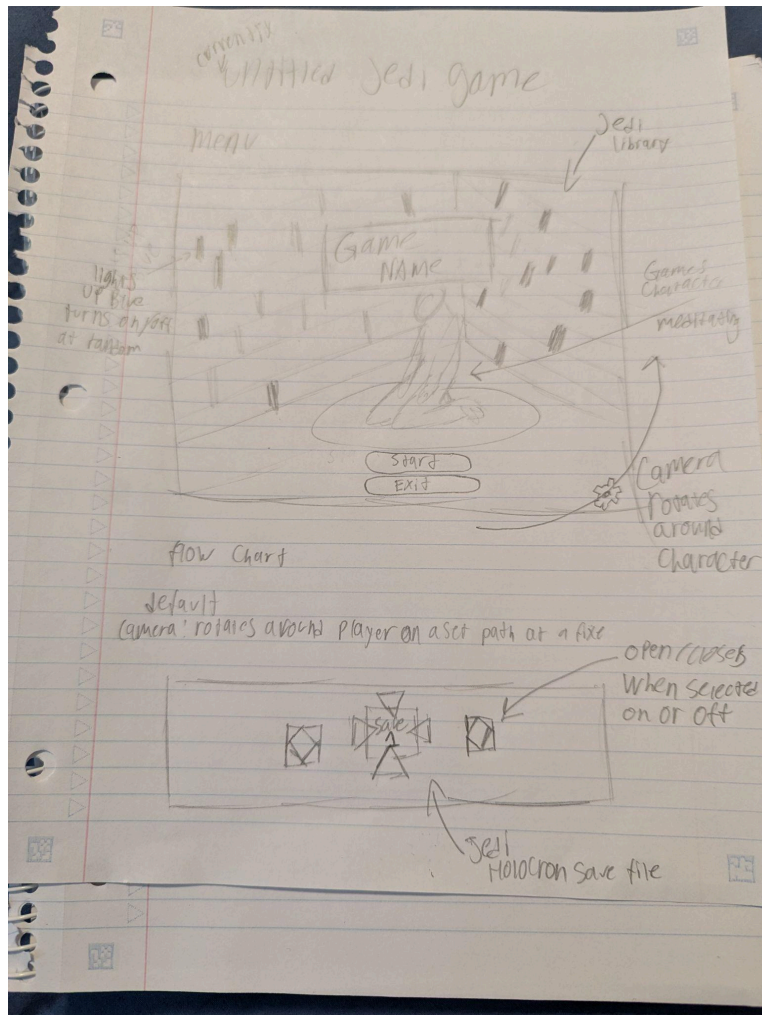
The actual gameplay portion of the animation appeared to use steering for Cal as that is how the player can control his movement. He builds up momentum in a direction and does not stop immediately when the player stops controlling him. BD-1 is likely following Paths and splines for his behaviors as he moves to specific objects, moves up them in a specific way and meets the player at a specific location at the top of the hill. The underlying math of Cals movement is likely really easy as its just pushing him in a specific direction. BD-1 is likely moving along a path at a set speed and only moving when he needs to stay ahead of the player

The animations of the gameplay portion of this scene contribute a lot as the communicate to the player what action you are taking. The animations enhance player engagement.

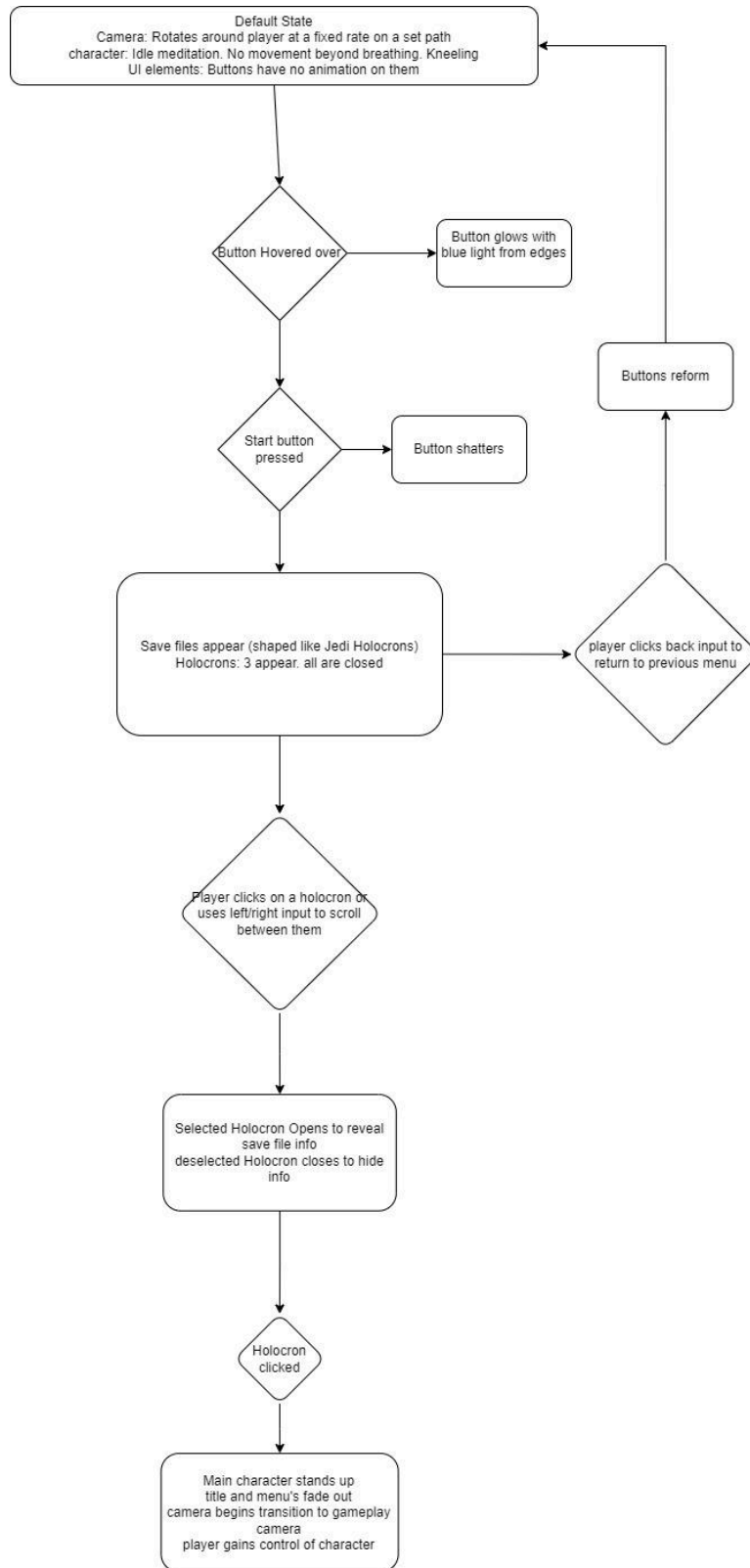
The character transitions smoothly between the cutscene and the gameplay, in game play he transitions between each animation very quickly but it isn't jarring. I think the animations are blended slightly.

Planning

Menu Sketch

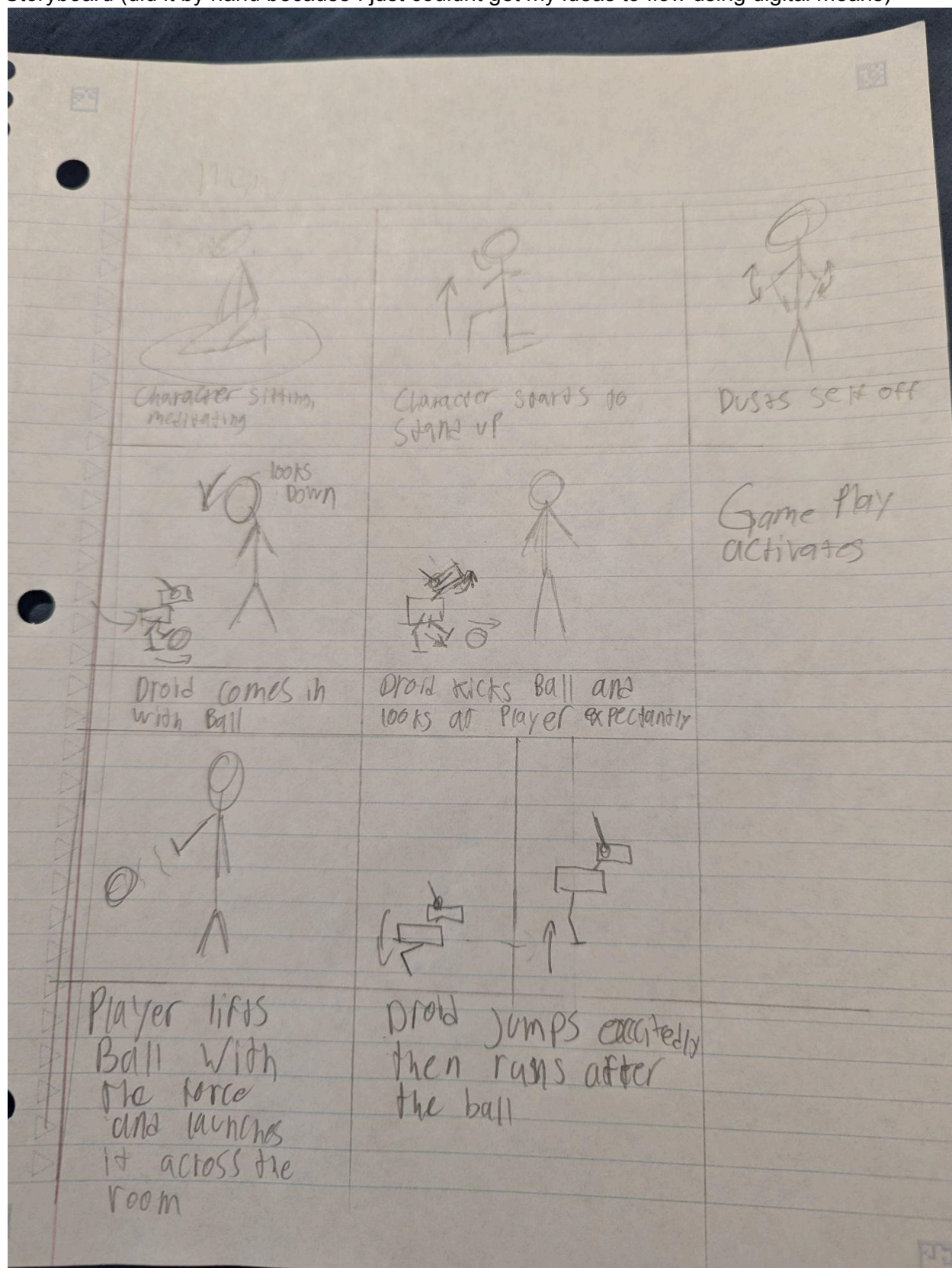


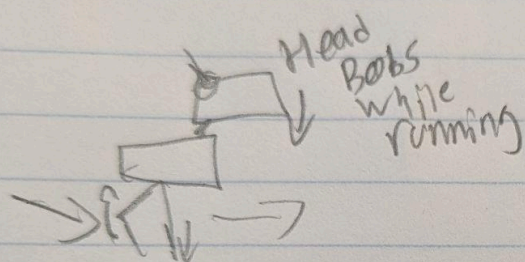
Menu flow chart



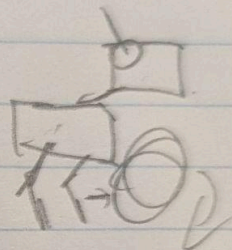
Animation

Storyboard (did it by hand because I just couldn't get my ideas to flow using digital means)

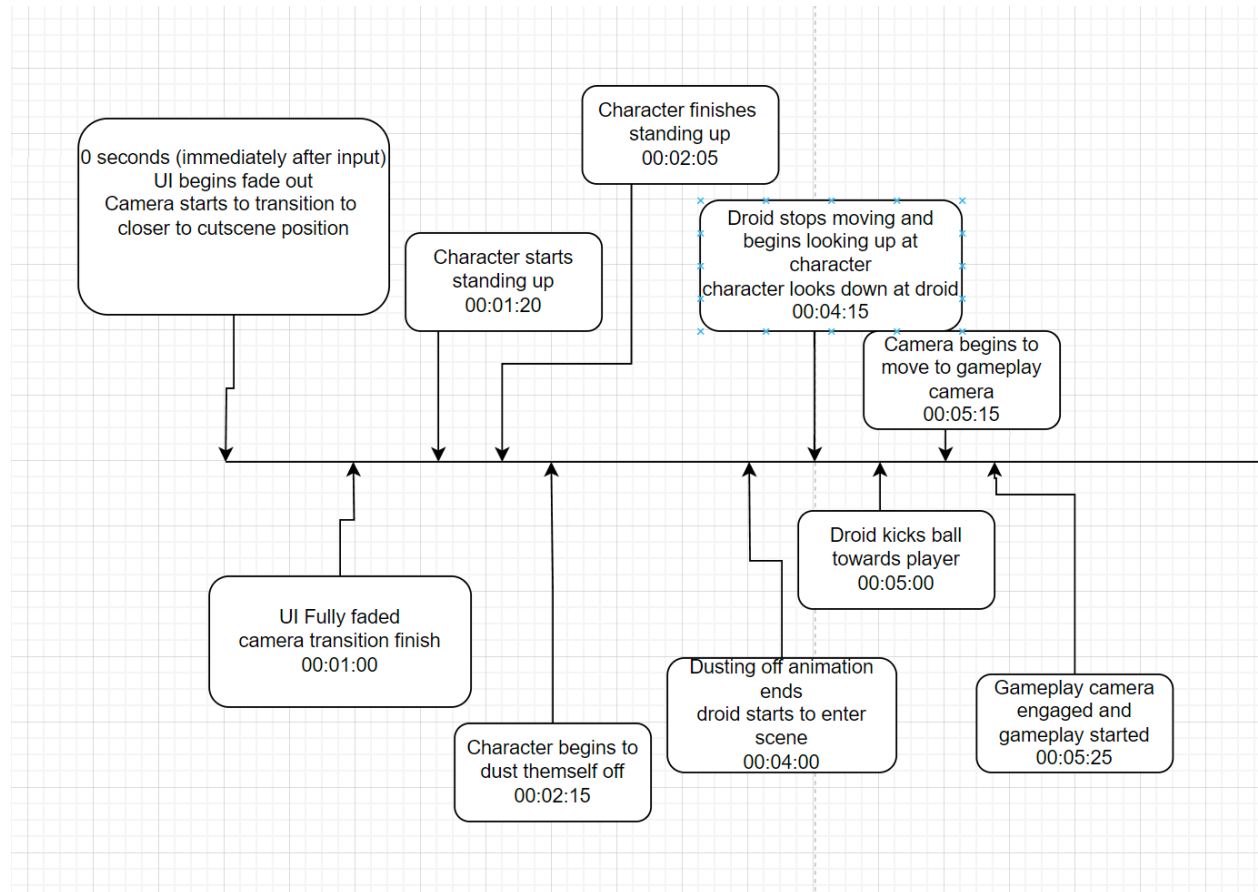




Chases after ball



Grabs Ball and pushes it towards player



Story:

Jedi Padawan is meditating and interrupted by Droid asking to play fetch. Jedi plays fetch with the droid by using the force to lift a ball and throw it.

Interactive gameplay:

Picking up and throwing the ball with the force. The droid will pathfind to the ball, then run it back to the player.