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Animation Explanation

I enjoyed this project. It was very fun to do, and fun to challenge myself and find new ways of animating what I imagined in my head, or to find ways to make my animations better. My animation is about a bee who looks all over to try and find a flower for itself. Due to the subject matter I chose, I had a unique set of challenges that I had to overcome. The one that proved the most influential on the project and how I went about animating my story was the matter of showing emotion. I didn’t expect it to be perfect, but the story should have some level of emotion shown to clue the audience in to the character’s feelings. As my main character was a bee, I couldn’t have dialogue, or show facial expressions to convey emotion to the audience. I chose to use one of the 11 principles of animation to show this emotion, timing. I have scenes in the animation where the main character flies slower than normal, and closer to the ground to convey feelings of sadness to the audience. There is another scene where the main character gets scared by a car, and flies backwards quickly and flaps its wings very fast to show feelings of shock. These varying timings combined with the story progressing on stage will convey to the audience how the bee is feeling at any given moment, giving more depth to the story. Another problem I encountered was making the animation look relatively natural. When I first animated the movements for the bee, I just had the bee moving around the screen. It would be a direct line or arc from one point to the other, and there was no other movement. This serves to move the main character and progress the story, but this looks like the bee is floating, not flying, and looks unnatural. Here, I ventured into different animation techniques such as animating with bones. I placed sets of 3 bones each in the wings of the bee, and was able to pose the bones and make it look like the wings were bending. I then applied a cycle modifier using the graph editor and that allowed the bee’s wings to move up and down to give the audience the impression that the bee was flying and not just floating. Then I keyframed the bee’s delta z position, which is essentially the change in the z position for the object. I keyframed this to be between the values of -0.4 and 0.4. This would apply the bee’s normal animation keyframe, and then factor in the delta value afterwards, giving the impression that the bee is constantly hovering up and down by a small amount. This gave a more realistic impression of flight, as the bee would not be at a constant altitude, but hovering up and down with the up and downbeats of the wings. I then set this delta z variable on a constant cycle to apply this to the whole animation. Another technique that was valuable in a pivotal scene was secondary action. Secondary action is when you animate the movements that result from an action, as well as the action itself. For example, in my scene, I have the bee flying low to the ground, and relatively slowly, to convey that the bee is sad. It then collides with a flowerpot. This is a pivotal point in the story, as the bee finally finds the flower it was looking for all along. At first I just had the bee keyframed to collide with the flowerpot and shift backwards a small amount, but eventually I animated the flowerpot as well. I animated the flowerpot rotating backwards when the bee collides, and when the bee backs away, to rotate forwards a small amount before it rests back in its original position. By animating the secondary action, and not just the main character’s, the scene looks more realistic. Something I also did that I enjoyed was changing the lighting of the scenes. I tried to have the scenes get progressively darker, and the final scene is night. At first, I lessened the value of the light, and that worked relatively well, but then I changed the color of the light to a blue shade rather than a shade of white and that did wonders for the atmosphere of the scene. The muted blues giving everything in the scene a darker shade also provided context to the audience about the state of mind of the main character. Going into the scene, the bee feels defeated, as it can’t find a flower. The color blue is typically associated with sadness, so the use of color in the lighting gives emotional cues as well as providing an interesting scene visually.

This project was very interesting for me. I loved learning about the different techniques used to animate in different ways. The most useful technique I would advise other animators to look into is using bones. Bones allow for much more detailed movement and manipulation of an object, and combining keyframe animation and bones can allow for some complex movements to be animated relatively easily. I enjoyed the challenge as it gave me an opportunity to learn about a field directly related to my own chosen field of game design. It gave me a valuable insight into the field of animation, and some basic skills that will help me in my career. Overall, I enjoyed this project very much.

Works Cited

“Blender 2.8 Tutorial: Graph Editor F-Curve modifier Cycles.” *YouTube*, uploaded by Steven Scott, 8 October 2019, <https://www.youtube.com/watch?v=e1GNz4QZ7qM>.

“BASICS OF ANIMATION - Blender 2.8 - Part 3 - Bones & Armature.” *YouTube*, uploaded by Grant Abbitt, 13 April 2019, <https://www.youtube.com/watch?v=IAiTYaiZmY0>.