

Time Spent	Date	To Do	Work Done
2 Hours	30/07/2024 4pm - 6pm	Set up project	Created the Visual studio project with freeGlut set up. Worked out how to draw to the screen.
2 Hours	03/08/2024 10am - 12pm	Work on setting up scene	Display the sky and ground on the screen. 3 ground points are random within a range. The sky has a gradient
2 Hours	06/08/2024 12pm - 2pm	Draw Snowman	Create a function for drawing a circle. Draw 3 circles for the snow man body, plus 3 more circles for the eyes and noes
3 Hours	19/08/2024 1pm - 4pm	Draw Snow	Created particle system for display the snow
2 Hours	20/08/2024 3pm - 5pm	Add Features & Diagnostic	Fixed scaling system and the snow disappearing. Display diagnostic data to the screen
2 Hours	21/08/2024 9am - 11am	Add Features	Added the ability for the snowman to jumping following a parabolic curve based on the time. Fix the snowman not returning to the same place. Add day/night cycle

When looking for two additional features to add, I thought back to what I had implemented in a previous Unity game. I decided on having the snowman jump when a key is pressed. There are lots of ways of doing this, but I decided on having the snowman follow a parabolic curve to add some kind of gravity effect like seen in the real world. I decided the best way to do this was to have the snowman snowballs be contained in an array so the values could be passed to the drawing function. For the 2nd feature, I decided on a daynight cycle as I thought it would add more to the scene. I did think about having the snowman start to melt when the sun was out but decided that keeping track of the data needed to make it look good would be too complex. Instead, I had the sky fade between the two colour states for day and night.

I think I did well given the time spent. I unfortunately fell ill with influenza A which made it difficult to work on the project for a week and a half. Next time, I would make a start even earlier to ensure I had enough time to add the complex features that I wanted to add. I would also give the snowman more such as a scarf and t-shirt. While the snow might not be optimistise to handle large amounts of particles, I think I did well on managing what is still active and what is not.