

I have done multiple extensions such as platforms, enemies, stars, rotating sun, day/ night cycles and many more.

The extensions I will be writing about is the stars, sun and day/night cycles:

How it works:

To rotate the sun, I had to develop my understanding of how the rotate functions works. I learned I could rotate the sun around an origin point using the translate function. I made sure the sun rotating would align with the day and night cycles by using several conditional statements to make it so the sun comes back up around the same time the screen starts to turn blue.

For the day and night cycles I had created 3 variables which were placed in the background function then incremented those variables by a variable called background speed to create the effect of the background getting darker and lighter. I had to learn to make several conditional statements to invert the background speed once the other 3 variables reached a certain point.

For the stars I declared a global variable and initialised to an array called stars. I created multiple functions, one of which pushed values into the stars array such as an x, y, size and speed. I created another function then traversed the star array to draw random ellipses that stretched 0 to -2000 with the x position and 0 to height on the y position. I used the speed property that I pushed into the star array to manipulate the ellipses to move slightly up and down using conditional statements.

I had to learn how to stop the circles from overlapping so within the function that pushed values into the star array I made sure that only stars that weren't overlapping got pushed into the star array.