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15-112 Term Project

Deliverable #1

Project Proposal:

My project is intended to be a virtual, visual and aesthetic-based environment which the user can manipulate; the basis is a tree that is continuously growing taller and sprouting branches at random intervals, with an automatic up-scrolling viewpoint. As the tree grows taller, the background is to be represented by a gradient sky that transitions into different colors as the view pans upwards. There is to be relaxing background audio as well that plays when the code is run.

The top left corner of the interface consists of three lines of information: toggle, temperature, and time. The temperature can be toggled by some keypress to change between its Fahrenheit and Celsius counterparts, and the toggle changes to the relevant attribute that the user wishes to change by click on one of six buttons on the top right corner of the screen. These six options are planned as sunlight/moonlight, precipitation, plants, animals, time, and temperature—each represented by an icon. Once the user clicks on an icon, the corresponding button will light up (increased opacity), and the toggle will change to say which attribute can now be manipulated through further keypresses. The user can click anywhere else on the screen, or another button, to disable the previous toggle.

If the sunlight/moonlight is toggled, then the user presses the up key to increase light and the down key to decrease light. The planned idea is to visualize rays of light as trapezoids that have a height of the overall window height, and for the up key to gradually increase the opacity of the trapezoidal polygons.

The precipitation toggle allows for rain and snow, depending on the temperature. Once toggled, the user presses the up key to increase rainfall or snowfall, and the down key to decrease as such. The presence of rain would also gradually implement a rain sound audio, whose volume will increase as the rain becomes heavier with the up key being pressed.

If the temperature icon is toggled, then up keypresses will increase the temperature, while the down keypresses do the opposite. At a certain threshold, such as below 32 degrees Fahrenheit or 0 degrees Celsius, the precipitation toggle will bring snow instead of rain.

The time toggle allows for the user to manipulate daytime and nighttime, thereby influencing whether the other toggle manipulates sunlight or moonlight depending on the time of day it is (although visually sunlight and moonlight would not expectedly be so different). The right keypress will fast-forward time to later, and the left keypress will rewind time to earlier. This also manipulates the overall background shade and hue, where nighttime hours will have darker and cooler gradients.

Toggling the leaves and plants icon and pressing the up key will spawn leaves and flowers to grow randomly from the branches of the tree, with the leaf and flower colors being randomly generated. Pressing the down key will ideally remove the attributes, whether by wilting or falling off the tree branches to decrease the overall amount.

Toggling animals follow the same idea, where the up key will spawn more animals and the down key will remove them; having two main species in mind such as birds and squirrels, decreasing the amount could be done by having the birds fly off screen and the squirrels running down the trunk to be out of sight. These animals would also be stylized polygons with reasonably randomly generated colors.

I plan to utilize Pygame to effectively implement all the user-manipulative attributes that are able to control the environment, as well as to draw and manipulate the images and aesthetics.

Competitive Analysis:

<http://www.ferryhalim.com/orisinal/>

<https://www.youtube.com/watch?v=mPYeTJd8klQ>

<https://www.youtube.com/watch?v=QLwTMGOUm10>

Admittedly I did not discover projects that dealt with the same objectives as my ideal final project, but I have found projects that inspire the type of atmosphere and aesthetic which I wish to incorporate. The general vibe and tranquility of Hermit is especially admirable and relevant to what I wish to exude in my term project, even though I have a different structure for how I want to visualize the nature that is also present in Hermit. There is also the common theme of spawning animals and manipulating time, even though at the moment I have different methods planned for doing so. I also intend to have my project be in soft colors rather than in grayscale. Another comparable aesthetic can be seen in Orisinal’s minigames, which employ pastel colors and stylized assets to create a calming and cute atmosphere and environment; I would like to hopefully closely follow these sorts of visuals for my final product. The project Pulse can be attributed to my goals in that it is another source of inspiration for the 2D, stylized graphics that I can hopefully integrate into my environmental settings such as the rain, snow, or sunlight rays, all of which are manipulated, flat polygons.