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Computer Prototype 1

Task, Component, and Link

We choose the first task "Users grow their virtual trees on this platform when doing pro-environment activities" to do for this assignment. More specifically, the task is to let users collect the energy they earned from doing pro-environment activities to grow their virtual tree on our website.

We use the component "Data visualization" in this assignment. When user collects the energy, which appears as leaf shape, the progress bar will change, and the tree size and shape will change as the user collects more energy and approaches the final goal.

Link: https://cychung18.github.io/NU-Forest/

Graphic Design

In terms of proximity, we put the leaf and the tree closer and separate them with a different color block from the selection bar at the top. The close distance between leaf and tree let people know that they belong together, so the process of adding energy to the tree by clicking the leaf would be more natural.

In terms of alignment, we align the progress bar and the selection tabs to the left so that user will make little efforts to explore what they can navigate and control. We align the tree to the center, because it is the main part of this web page. Although there is quite a lot white space when the tree is small, but the center graphic of tree is clear and focused enough convey its importance

In terms of contrast, we use light color for the background color and selection tab text and use green color on the tree, land and leaf to convey that these are the main parts. While the design is consistent, the green color and dark brown color of the tree are enough to make a contrast and drawn the attention of the user.

In terms of repetition, we use same graphic to represent leaf and energy, so that the user will know that these elements are consistent in function and interactive methods.

Our logo is consistent with the overall design style of the website and highlights the main point of the website, which is the "Tree". We have consistent brown text color in the logo and text.

Usability Design

In terms of visibility of system, we use a progress bar on the top right to let user know their status in terms of energy collecting. The tree size growing larger is also an obvious indication of the status change.

We use leaf to represent the energy for tree, because this is the norm in real world. It is natural to think that adding leaves will make the tree bigger, so the user will make little efforts to understand the relationship between the leaf and tree. And we use some delay between different rounds, because in real use, the new round of leaves will not appear until the next day.

The design of interaction method with the energy collection process is consistent, users only need to click to collect the energy. This simple interaction is also consistent with the outside gesture such as grabbing the leaf. In later version, we will implement this

standard to the friends' page as well.
Users do not need to remember things on our website The activities they have done and the progress they have made will all appear on the page, and they do not need remember anything about their progress or other information they need to know.
We made the page really simple, and minimize extra information. We only give a simple land image and sky to convey the environment, and there is no heavy elements that may draw the users attention other than the tree.
At this stage, the user can only collect energy. In terms of adding energy to the tree, there is no much need to undo a behavior or generate errors that may confuse the user. So we have not added such functions to the page. In later version, when user interacts with their friends, we will add the flexibility of allowing errors and help users recover from these issues.

Component
In this web page, we include the component of Data visualization. We use the graphic of tree to demonstrate the progress of energy collecting. When user collects more energy, the tree will grow to a bigger one, along with the visual change of progress bar at the top right of this web page. The progress bar is also demonstrating the visual relationship between the leaves and the tree because as use collects the leaves, the progress will be filled in, and then the tree will grow larger when the bar reaches a certain point.

Observations
When we ask a user to perform the task of collecting the leaves, he moved his mouse around the web page. He approaches the leaves but hesitated when clicking and moved a little bit more before he clicked the leaves. Later, when we asked why, he said that he thought if the leaf was clickable, the mouse will turn to hand image, but he did not see such change.
Another user clicked the leaves really quick, and he said that when clicking at fast speed, the number added will not appear.
Also, another observation is that when a user played with our website, she was really confused when finish collecting the second round of leaves because the tree grew larger with just 4 leaves collected instead of 5. She stopped to ask why, and we explained that because we made the progress into percentage instead of leaves number。

Resolution
In the next version, we will make the arrow turning to hand when the user moves the mouse above the leaves to let the user know that the leaves are clickable and different from the background.
We will also fix the issue of fast speed clicking, and make the number appear no matter how fast the user is clicking or just prevent the user from clicking too fast.
We will also change the progress from percentage based to number based. Although we think percentage is more fair, the user seems to be more comfortable with number based progress. This is probably due to the distinct existence of leaves as separate elements.