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Project idea: Dress up game

Motivation for why this is an interesting project:

This will involve a lot of work making a GUI that is aesthetic, but also efficient. We will also be using machine learning to help the program get better at picking outfits. This project will require us to take user inputs, convert it to data, and use it to make an outfit we believe the user will like.

Description of what task/problem you're trying to solve:

We are going to make our own version of a popular style of game (the dress-up game) so that we can use GUIs, machine learning, and multi-threading to create an entertaining experience for the project audience. The project will draw from the program user's ratings of particular clothing items to dress a doll according to the user's preferences. The final product will be an online game that would be both safe and fun for children to use.

Description of the GUI along with with a sketch:
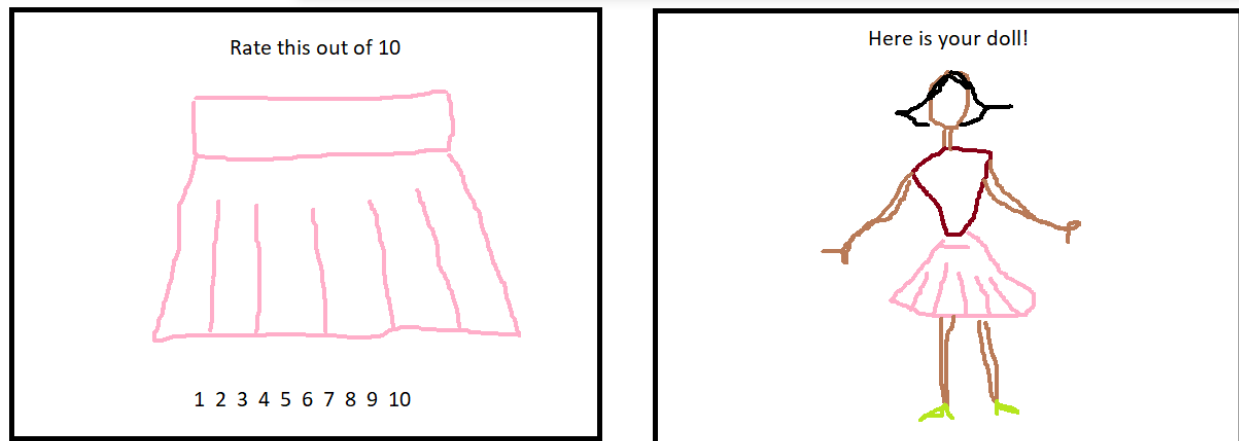
One window will allow the user to view and rate different clothing items and the other window will display the doll and allow the user to make final changes to how it looks.

Description of how your project incorporates networking and/or multithreading:

In our project, an item of clothing is displayed on the doll until a similar item of clothing gets a higher rating. This is an example of multithreading by starting the thread that displays the clothing when the item is "selected". The item is then put to sleep indefinitely when a new clothing item is selected.

Description of how and why the project is sufficiently challenging:

The project is sufficiently challenging because it will involve significant work in terms of developing GUIs that are both functional and aesthetically pleasing. The visual component in particular will add an extra challenge for us because we will need to source or create pictures of different outfit pieces and then incorporate these into our GUI. Additionally, with our use of multi-threading, we will be implementing multiple GUIs within this project that have different functions, so that will add an extra challenge and help us gain experience with multiple different GUI functionalities. With these multiple GUIs, multithreading will be required for us to navigate between the two GUIs and use them simultaneously, which will also make the project sufficiently challenging.

Description of a testing plan and its deliverables:

We will start with making the GUI, as this is a very important part of the game. This will include making the windows as well as buttons and spaces for images. We should make sure the buttons will work as well as features such as scrolling, and making sure that everything looks good. Then we will need to add the images of the clothing and create objects for them with aspects such as color, style, pattern, etc so that machine learning can use these aspects to create an outfit. Then we will create the multithreading aspect and finally add the machine learning. We should test edge cases such as people rating everything the same or pressing buttons when they shouldn't.

A description of how the manager's workload will be adjusted to account for the extra work they are doing:

The workload will be adjusted by being assigned less to-do tasks and doing more of the code review tasks.