

CS4530 Final Project: "Wardrobe Area"

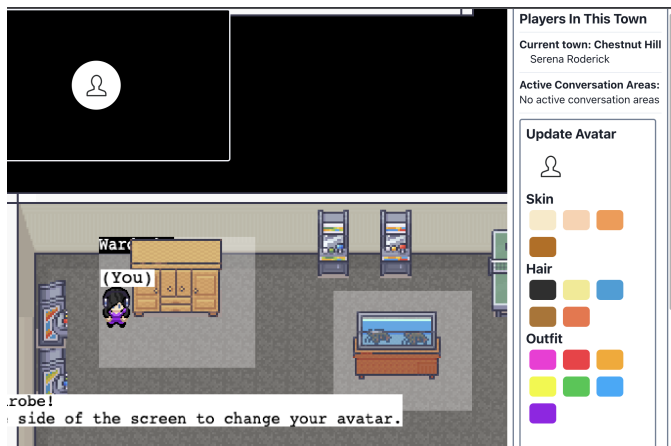
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Our Feature: Wardrobe Area

For our team's project, we decided to create a new InteractableArea that enables users to customize their sprites. Our feature is available through the Area labeled "Wardrobe" near the initial spawn point of the town. The Wardrobe is easily recognizable by the wooden chest at the center of the area. If they want to change this default sprite, they can do so through the WardrobeArea added near the spawn. When the user enters the WardrobeArea, which is shown as "Wardrobe" on screen, they are presented with the message "Welcome to the Wardrobe! Use the menu on the side of the screen to change your avatar." After pressing the spacebar, a menu will appear at the side of the screen containing all of the functionality for changing the player's avatar. From there, they will be able to use the sidebar to their right, which enables them to modify a variety of visual characteristics. More than one user can be in the Wardrobe at the same time. Upon entering, users will see options for skin, hair, and outfit colors on this sidebar. The user can make a change by selecting the specific color icon with their mouse. Making such a selection by clicking should be immediately reflected in the game and visible to all users. There are four different skin tones as shown above and five different hair colors (black, blonde, blue, brown, and ginger), creating 20 combinations from those two characteristics alone. When moving through CoveyTown, the outfit changes should be preserved without reverting to the original avatar.

Demo and Source

Our demo site is available at <https://638743e3c79e7400082cf8f9--fall-22-team-project-group-410.netlify.app/> and our code at <https://github.com/neu-cs4530/fall-22-team-project-group-410>



Our Technology Stack & Design

In the backend, we followed a similar approach as we did for the other interactables and started by creating the WardrobeArea class which includes methods for changing the avatar of a player. We updated the Player.ts file to include an avatar attribute, which holds data for the skin, hair, and outfit color of each player. We also allow for the avatar attribute of a player to be modifiable via a setter. Finally we added a method into Town which allowed wardrobe areas to be successfully read in by the town, and included a wardrobe areas field in the townController.

In the frontend we started with a WardrobeArea interactable that mimicked the fields of the ConversationArea, but added a function for updating the avatar of a player using the townController's ourPlayer attribute. We designed a menu that pops up as players enter the WardrobeArea and disappears as they exit. To do this we also created a WardrobeController which used an occupantsChange listener to keep track of all players who are currently in the wardrobe and able to access the avatar change menu, and added a playerUpdatedAvatar event which would be emitted whenever a player successfully updated their avatar.

We packed all of the menu functionality into the AvatarSidebar components, with the AvatarSidebar class serving as the parent which also handles displaying the menu to the user at the appropriate time. Then each of the subcomponents are designed to reassign the value of player.avatar when clicked.

Future Work

For future work we would like to see the wardrobe extended to have more features and functionality. Ideally the feature or an extension of it would allow users to add accessories to their Avatar like shoes, headwear, bags, and handheld items. We would also like to see the user be able to choose and change their base sprite so that different genders, body types, hairstyles, and clothing options are supported. As of now, while using our new feature the user only has the ability to change the colors of the skin, hair, and clothing attributes that the sprite already has, this is valuable for satisfying the user's desire for customization that provides differentiation between players, but does little to change the actual appearance of the avatar. Extensions of the wardrobe area that provide multiple base sprites to choose from would add a new dimension to the level of customization that users can achieve in CoveyTown, which would allow users to feel more expressive and represented by their avatar.

We also planned to encapsulate the avatar customizability within a pop-up menu that appears on the map, however due to time limitations it made more sense to display our menu within the existing social sidebar. This design choice works for our use functionally, but having a pop-up that appears in the map on the actual wardrobe area would feel more interactive and more clearly justify the purpose of having a physical wardrobe area in the map itself.