MLG Vending Machine – Interface Design Changes

To make our **MLG Vending Machine** the best we could we have had many changes in the style, functionality and user friendliness in order to provide a smooth and easy to use UI with also a strong focus on UX. Many of these changes have been made to make it easier for users to navigate the vending machine but also provide them with a more engaging and unique experience.

**ORGIN DESIGN:**

A screenshot of a cell phone

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*Figure 1: Original Main interface layout of the* ***MLG Vending Machine****.*

As seen in Figure 1 our original layout is like our final product with the same image used for the base of the vending machine as well as having the same use of images for currency. This layout was primarily going to be a strong guideline for our general layout and although there are similarities there are many issues with this base design.

**MAJOR CHANGE 1:**

One of the primary issues with this layout includes that of the currency, since one of our first issues with styling the currency was the size and positioning of the money as the needed to be visible and easy to use but were becoming too much of a focus if they were enlarged. To solve this issue we decided to initially remove the some of the money in order to make a more compact and easy to use range of currency, along with positioning them out in a straight-line in order to not take up unnecessary room, finally was the issue with the money still being too small; as this issue required more work as to fix this issue we decided on making a feature in which the user could make the wallet and money inside grow larger and allow the user themselves to decide on the sizing of the currency in order to satisfy both usability and appearance.

A picture containing box

Description automatically generated

*Figure 2: Final design for wallet and currency.*

Another major change to our machine was also our change in how money worked within our machine, as at first, we utilized onclick functions to simply change the amount of money there was inside the machine. We both found this to lack much interest and decided to change how users interacted with money by making each item of currency draggable into a black slot above the wallet. Although this was an improvement to the to the previous system it required much more work and research to make it work in a way which was simply yet usable. Through this process another smaller feature was added such as an amount of money within the wallet was made which when the wallet could not support a type of currency due to lack of funds it would remove that currency as an option. Overall, we decided to make changes to the way money works in order to make our machine more engaging but also more visually appealing with a stronger resemblance to how a real vending machine would work.

**MAJOR CHANGE 2:**

With our machine not just, the frontend changed as we along the way made various changes to the backend of our machine and how that information was being displayed.A screenshot of a cell phone

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*Figure 3: Original layout for admin menu.*

As seen in figure 3 our original design for our admin consisted of a bulky table and many confusing buttons and other inputs, we decided that this lacked good visual hierarchy and lack much form of whitespace surrounding the elements themselves. Another issue with tis was how we planned on displaying the admin as a whole as it was planned to make the admin appear and disappear under the machine, which we soon found to be too much information on screen and made the machine itself look cluttered and confusing. To fix this we completely reshaped our backend in which we were not reliant on so many inputs and allowed for stock numbers to be changed individually by simply selecting his code with the keypad. On top of this we also fixed our issue with cluttering by making the admin appear on a slide out menu which would smoothly appear in the right side of the screen; this combination of changes made our admin not only easier to use but drastically reduced the amount of information on screen at any point in time giving the appearance of a clean and organized layout. And finally, we added in a password system into the admin which means no interactions could be made unless the password was correct which controlled who could and couldn’t use the admin.

A screenshot of a cell phone

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*Figure 4: Final layout for admin menu.*

**MAJOR CHANGE 3:**

One of our most UI focused changes was our overall better use of color and implementing a strong color scheme as originally our buttons and tables look bland and didn’t fit the bright and vibrant colors that they sat in front of and thought that without good use of color the machine looked more confusing and lacked the ability to give the user clear and easy navigation, and simply made the machine hard to understand. To fix this we decided on sticking with the MLG color scheme or red white and blue and utilizes good practices of visual hierarchy mainly through contrast and positioning to make the machine easy to look at and understand. Primarily we aimed to remove colors that lacked contrast with either red or blue and only used colors such as black when given a more suitable background. Overall, our aim was to make our website look better as a whole with a clean matching color scheme that makes the machine easier to view and in turn use.

A picture containing parking, meter, side, lot

Description automatically generated

*Figure 2: Final color scheme for frontend.*

**Conclusion:**

Overall, our machine has undergone many changes in order to make our webpage look simple, easy to use, visually appealing and functional as we wanted to provide our users with only the best experience when using the **MLG Vending Machine**. Thanks to these changes we have been able to produce a more refined and useful product and hope you will enjoy using our machine!