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# Assignment 3

## Question 1)

When designing my icons, I followed and considered both general guidelines and icon-specific guidelines. When beginning to design my icons I used black and white wire-frames and a monochromatic color scheme. I did this because colors are a key feature and characteristic of icons that can convey the personality or branding of the icon. I understand that using colors can be difficult if they become too distracting and have unintentional emotional effects for the user due to either preference or cultural differences.

When designing my icons I kept in mind the rules of using colors. Most notably, I used color sparingly by designing the icons in monochrome. My primary purpose for using color was to draw attention to the icon and display what task or function the icon is meant to convey. Additionally, I designed my icons with different users in mind so that the icons can apply to different possible user interfaces or colors. Essentially allowing the user’s preference to be acknowledged.

Moreover, my purpose for using colors was to help express certain information. For instance, to express contrast I used light color (white) on a darker background (black). Additionally, to emphasize key objects in the icon design I made the border or stroke thicker. Finally, to de-emphasize I used a dark gray as an unsaturated color.

My design rationale behind my design also focused on addressing design issues that can occur. For instance, I avoided jaggy, uneven lines in the icon design that would diminish the icons readability and alignment. When designing the icon, the background pattern I kept in mind was a solid colored background. Specifically, when designing the icons, a solid white background was used.

Throughout the design process, I tried to apply the principles of icon design to ensure the usability of my icons. To ensure the clarity of my icons I tried to communicate the metaphor quickly and efficiently. My design rationale was to have the icon design be built on certain familiar icons and icon design like the *More Option* icon design.

To ensure the readability of my icon design, I made sure that the details were not too fine and that the spacing in the design was distinct. My design rationale was that I did not want the design to get too muddled up or indistinguishable when the icon size changes by getting smaller. I used thinner strokes, contrasting colors, and plenty of space to convey the icons readability.

For the icon design, I made sure that the individual icons were aligned and all the icons followed the same alignment so that they would each feel balanced. All of the icons try to keep the whole icon design directly in the center so that there would be no drastic change in the icon position when going through all of the icons on the same screen. Additionally, with certain icons like the *Turn an Image 90 degrees* and *More Options* I wanted it to feel vertically symmetrical by having the same alignment proportions.

When designing my icons, I tried to keep the design simple but representative by keeping the amount of graphical detail to a minimum. Specifically, I tried to avoid using more intricate details because if the icon size is smaller due to the screen or user interface then it can be more difficult to distinguish between details. I made sure to focus on the basic characteristics of the object and used a more reductive style to help make sure the metaphor is being conveyed. Though I did make an exception for the *Turn an Image 90 degrees* and *Choose a different lens* icon because I felt a little more detail would help indicate depth and convey the message without affecting the icon’s recall ability.

To ensure that my icon design was consistent I tried following the same stylistic rules I set for myself for all of the icon designs. I tried to convey more visual weight by utilizing greater thickness in my strokes and the primary object size within the icon design.

Since my icons were primarily simple designs with a monochromatic color (black, white, and gray) the personality of my icons was not too big. The personality I was trying to convey a sense of professionalism with icons that were crisp but not too heavy. For instance, I used more rounded edges and curved lines to give my icon design a more approachable and user-friendly feeling.

Finally, to ensure that the icon set was of quality was to organize, well-document, and test the icons. I organized the icons by naming the assets very clearly so that they can be easy to find. To document the icon set I articulated the icon set’s key principle and technical rules below:

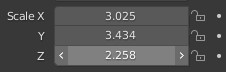
* Key Principles:
  + Clarity - Make sure that the icon is recognizable and clear and ensure that the user understands what the icon represents.
  + Readability - Make sure the icon is readable regardless of size and that the details and spacing are not too fine or small.
  + Consistency - The stylistic design rules are the same throughout all of the icons.
* Technical Rules:
  + Use a **400 x 400px** canvas
  + Use **rounded edges**
  + Use **connecting strokes** unless broken segments are helpful for comprehension
  + **Adjust curves when necessary** to maintain the design principles
  + Use the following **shape keylines**: 236 x 236px circle and 375 x 375px rounded square
  + Use a **3px stroke** for primary icon object
  + Use a **2px stroke** for highlights that draw the user’s
  + Use a **1px strokes** for greater details
  + Use **30% opacity** to indicate area of effect
  + Use light gray stroke color to indicate **forcing function**.

## Question 2)

I will be critiquing the **Blender User Interface** by verifying what design guidelines it follows.

I believe that the UI uses colors for several correct purposes. Specifically, I believe that the UI gives a clear indicator of the system state like what the user is hovering over and what elements are being currently used (which can be seen in Figure 1). Moreover, I believe that the UI clearly communicates organization and relationship throughout the interface. For instance, in the bottom right panel, the UI groups together the functions by color. Blue is used to illustrate the constraints while Green is used to illustrate the object properties as seen in Figure 2.

**Figure 1 - State Indicator**

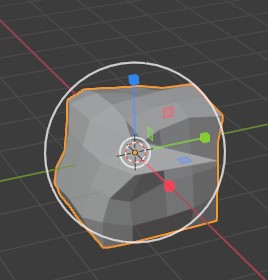


**Figure 2 - Organization and Grouping**



I believe that the UI does follow a majority of the rules of using colors when trying to express information. The UI expresses contrast by using light colors on a dark gray background. The UI expresses similarity in the groupings by using similar colors and saturation levels as seen with the icons. The UI uses bright colors like Red, Blue, and Green to emphasize the Direction and Scale of the primary window frame.

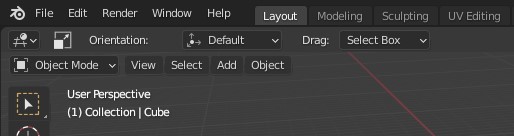
**Figure 3 - Saturated Colors**



I believe that the UI does use a clear and readable font for the UI. The font used was Bitstream Vera which is a sans-serif typeface. This font helps ensure that the text on-screen is still readable despite smaller font size or lower screen resolutions.

I believe that the UI should use a few other different font sizes to express organization and importance throughout the UI. Specifically. For instance, I believe that the font size for the tabs should at least be larger than most of the other text on the interface to illustrate the importance and difference between editing tabs. However, the font size throughout the UI is the same size.

**Figure 4 - No Change in Font Size**



Finally, I believe that some of the icons within the UI are too small and negatively impact the metaphor and function that they are meant to represent. Specifically, in the **Sculpting** editing window, the icons on the left hand side can be too small and that will affect the level of readability since the icons can have more details.

**Figure 5 - Small Sculpting Icons**

