**Screen Properties**

As mentioned in earlier units, components have properties. The Screen also has properties. You can change the color, center your objects, change the image icon that appears when you download the app and more.

Here’s a list of the most relevant properties to visual design contained in the Screen and what they do.

- **AboutScreen**
  - Information about the screen. It appears when "About this Application" is selected from the system menu. Use it to tell users about your app. In multiple screen apps, each screen will have its own AboutScreen info.

- **AlignHorizontal**
  - Use this to change the alignment of your components to be right, left, or center.

- **BackgroundColor**
  - Sets the background color of the screen.

- **BackgroundImage**
  - Sets the background image of the screen.

- **Icon**
  - Sets the image for the app that’s displayed when the app is listed on your phone with other apps. In multiple screen apps, only Screen1 has the Icon property.

- **Visibility**
  - Can be used to hide or show a component. Useful for games that have many sprites that disappear or for hiding full arrangements.

- **Scrollable**
  - Indicates whether the app will only take up the size of the phone screen or a bigger size that the user can scroll through. **Make sure to uncheck the scrollable property to set a component’s height property (such as an arrangement or drawing canvas) to fill parent**

- **Title**
  - Text that’s displayed in the top bar of the app. Use it to tell users what the app or screen name is! Note that the **Screen1 name** cannot be changed but the **Title** can.

*Note that many properties of the UI can be set during program runtime by using orange set blocks.*

---

**Colors**
In the color property of most components (such as BackgroundColor of a Button, TextColor of a Label, etc), App Inventor provides 15 different colors for you to choose from. If none of these colors please you, you can change the color in the Blocks Editor by using the setter block for the component’s property. The Colors drawer contains color blocks that when clicked has 70 colors to choose from.

After clicking:
Lots of colors appear!

Let’s say you still can’t find the right color. There’s one more way to create colors using App Inventor.

Notice that in the Colors drawer, there’s a block called “make a color”. This block takes a list of 3 numbers which represent R, G, B. RGB values are the red, green, and blue intensity values that are used to define a color. They range from 0 to 255 and are commonly found to describe colors in computer programs.

This site, HTML Color Codes, is a great resource for finding RGB values of a color (scroll to the bottom to play around with different RGB values).

**Layouts**

On the Designer screen, you may have noticed a drawer called Layouts. This drawer contains “Layout” components. These
components are used to organize components on the screen. *Horizontal Arrangement* allows you to place components next to each other horizontally. *Vertical Arrangement* allows you to place components next to each other vertically. This is different from normal placement in the case that you want your components in this arrangement to be aligned differently or to be spaced inside the arrangement box. *Table Arrangement* allows you to place arrangements, one in each corner, next to each other in a table shape. The size of the table can be changed by adjusting the Columns and Rows properties which takes numbers, representing the number of columns and the number of rows. *Note: When arranging items using Table Arrangements, some components may overlap each other and get hidden off screen.*

![Table Arrangement with 2 rows, 2 columns](image)

Layouts contain other components. Once you put a layout in your app, you can drag other components and put them inside your layout. You can even put layouts inside layouts.

Layouts have properties too. You may notice that after you place a layout the *Align Vertical* and *Align Horizontal* properties are grayed out and not clickable. This is because the height and width of the arrangement component have not been set yet. Set these to the size you would like or choose “Fill Parent”. Now all properties should be accessible.

Arrangements also have a *Visible* property. Setting an arrangement’s visibility to be False will set all of the components inside to have visibility False. This will hide all of the components. This is useful if you want a menu screen with several buttons to pop-up at the beginning or end of a game but disappear during game play.

Download the .aia for the app: Cool App
Go on the Designer screen, try moving around the layouts to different places on the screen. See what happens. Add new layouts, change the width/height sizes in pixels, or add new components.
Using other editors to make images for buttons

App Inventor provides properties for each component that you can change to make them look the way you want. Sometimes these features are not enough. Since buttons can contain images, you might want to design a button image in another editor then upload the image you create to App Inventor.

Some suggested programs include:

- Google Drawing (You can find this by going to your Drive and clicking Create -> Drawing)
- Photoshop
- Paint (Already installed on Windows.) or Paintbrush (for Mac)