**Week 2 – Interactive Assignment**

**Color Mixer**

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Here's how I developed the program step-by-step:

**Step 1: Identify Requirements**

The task was clear — accept two primary colors as inputs from the user, mix them, and display the resulting secondary color. If the user inputs invalid colors or a combination that doesn't produce a known secondary color, an error message should be displayed.

**Step 2: Choosing Tools**

I utilized Python's input() function to collect user inputs and the print() function to display the results. For validating and checking user inputs, I used Python's list data structure (primary\_colors) and a series of if and elif statements for decision-making.

**Step 3: Writing Code**

1. I began by defining the list primary\_colors containing the three valid primary colors: red, blue, and yellow.
2. Using the input() function, I prompted the user to provide their chosen primary colors (two in total).
3. I then checked whether both inputs are indeed primary colors by verifying their presence in the primary\_colors list. If one or both colors aren't primary, I printed an error message.
4. If both inputs were valid primary colors, I employed a series of conditional statements (if and elif) to determine the resulting secondary color. This involved checking each valid combination of primary colors.
5. Finally, for any unexpected color combination (which shouldn't be possible with the given conditions but is always good to account for), I printed an error message.

**Step 4: Testing**

I ran the program multiple times with different inputs to ensure that it correctly identifies and displays the secondary color for valid primary color combinations. Additionally, I tested invalid inputs and combinations to ensure the program responded with appropriate error messages.

And there you have it! That's how I built the primary color mixing program in Python. I hope this step-by-step breakdown helps you understand the development process!

A screenshot of a computer program

Description automatically generated

[Source Code](https://ray.so/#code=&width=920)

[**Console**](https://ray.so/#code=&width=920)

A screen shot of a computer screen

Description automatically generated