

7.2. Create a Background Image Frame Row by Row

1. Create a simple background image.

To create an image we use 3x4 color image using the provided page. 3x4 is the size of the image. Why?

	0	1	2	3
0				
1				
2				

2. Take turns to find hexadecimal codes for each color.

Use RRGGBB for each hex code.

E.g., Red is FF0000.

Hexadecimal Color Codes

	0	1	2	3
0				
1				
2				

3. In `/home/pi/AOLME/Session7/`, open and run `FrameEx.py`. **Modify the code for your example.**

For the colors, modify code like:

```
r = "FF0000" # hex code for red
```

To create a red frame of size rows x cols, we use:

```
frame0 = np.array([[r]*cols for row in range (rows)])
```

Discuss this code. How does it work?

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4. Enter the image **row-by-row**.

For example, for the 0th row for a four-column image, we use:

```
frame0[0] = [r, b, r, b] # Modify!
```

Discuss why each line has this format.

Discuss the difficulty in specifying images row-by-row.

Co-facilitator should relate discussions to the project.

Make sure everyone participates.