

Creating Custom Views



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ANDROID ARCHITECT

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Overview



Intro to completely custom views

Creating a view from scratch

Drawing with math



Intro to Completely Custom Views



Basic Components

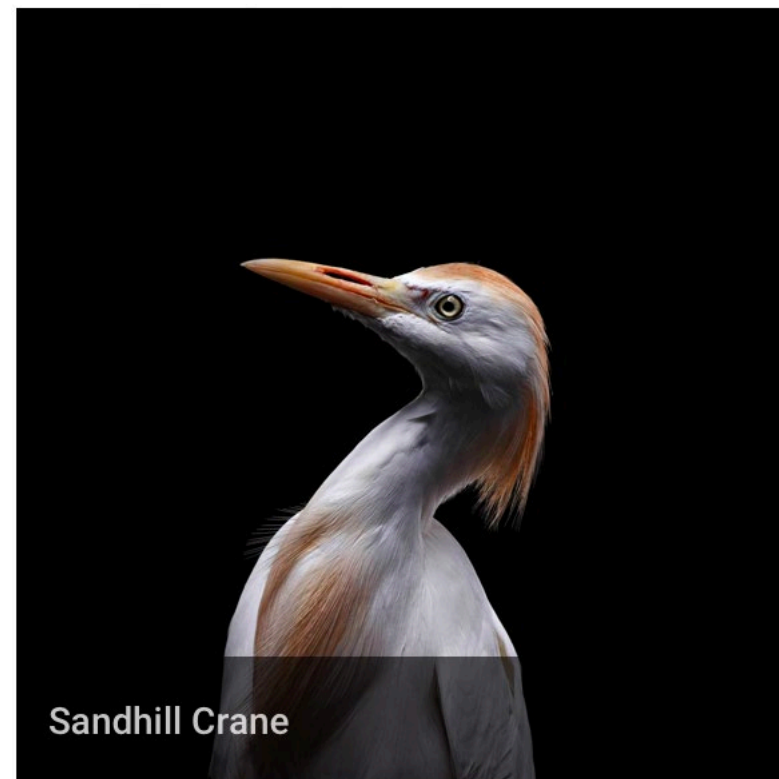
Label

SHOW

Label

|Input text


255





Sandhill Crane




Compound Components











Basic Components

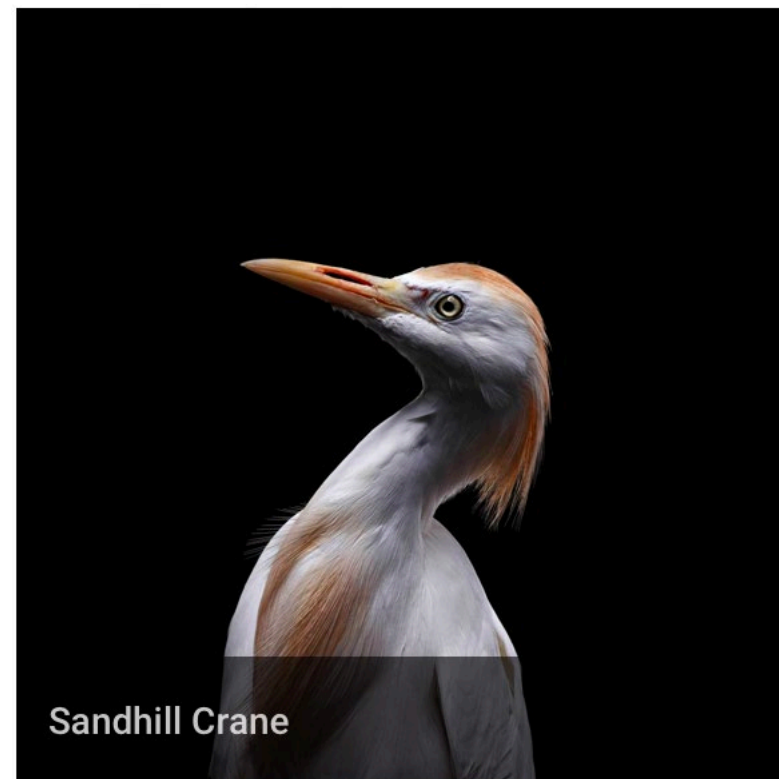
Label

SHOW

Label

|Input text

255



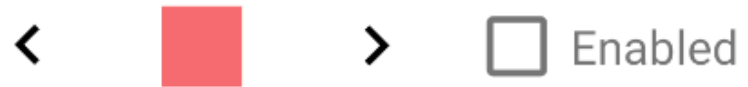
Sandhill Crane



Extending Views



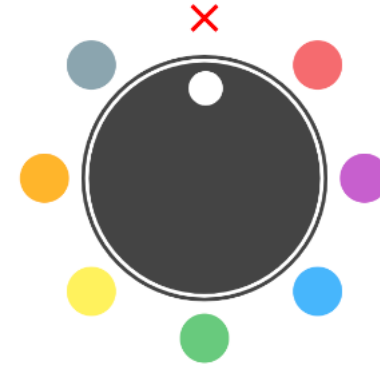
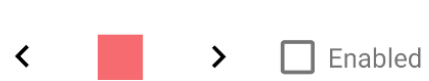
Color Selector Progression



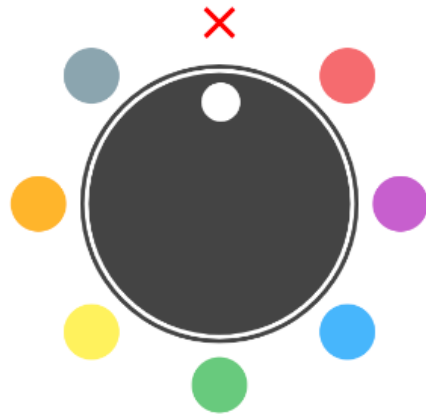
Color Selector Progression



Color Selector Progression

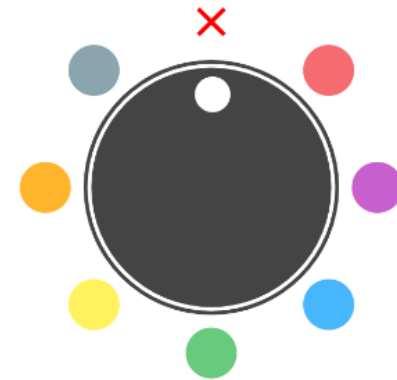


Color Dial

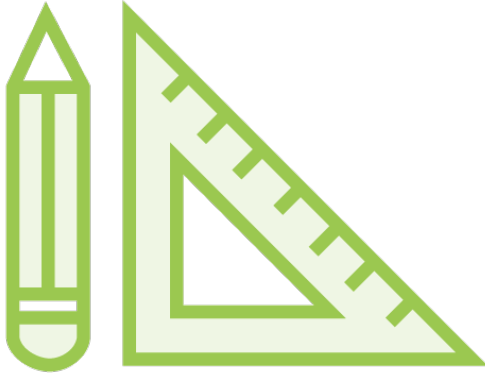


Custom View

Extend View class



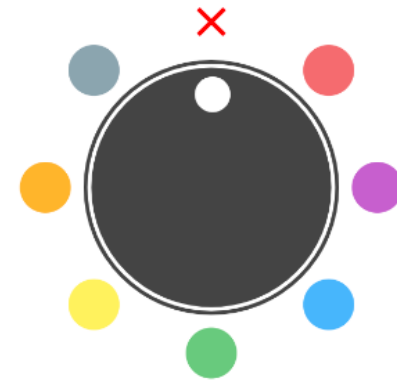
Custom View



`onMeasure()`



`onDraw()`



Creating a View from Scratch



<Live Coding>



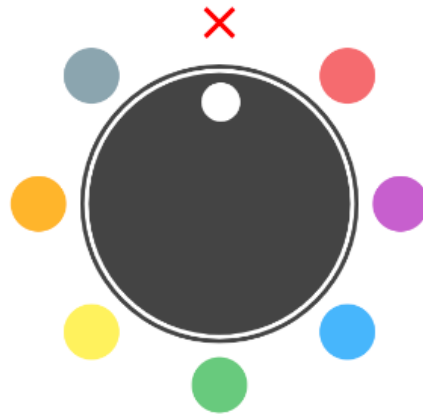
Drawing with Math



Color Dial



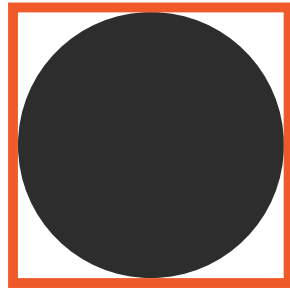
Color Dial



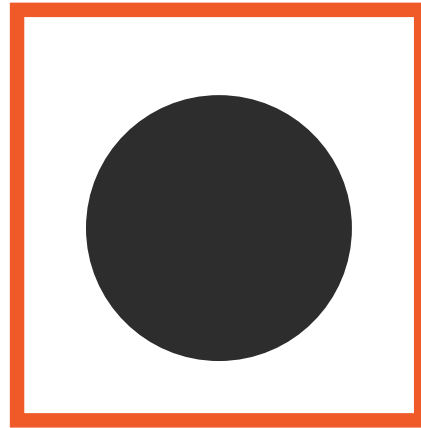
Color Dial



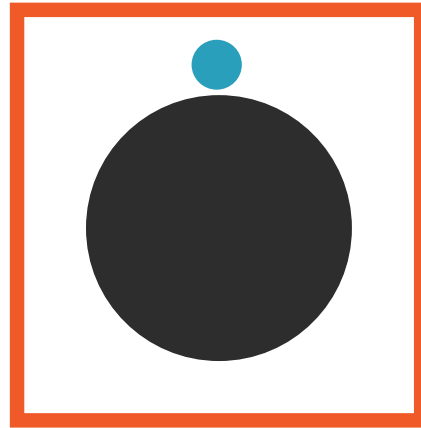
Color Dial



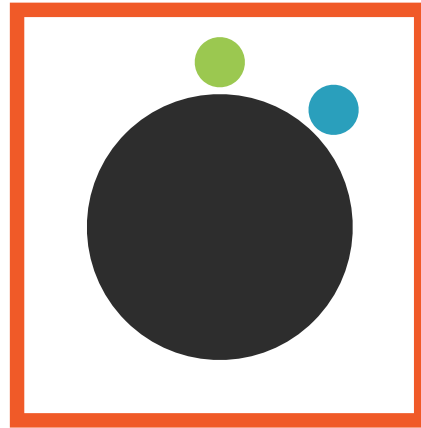
Color Dial



Color Dial



Color Dial



Color Dial

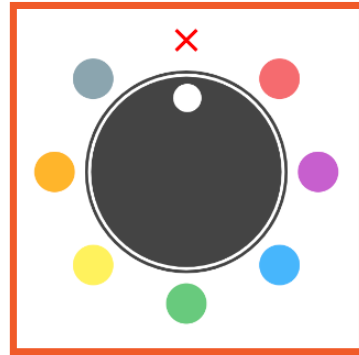
$$360^{\circ} / 8 = 45^{\circ}$$



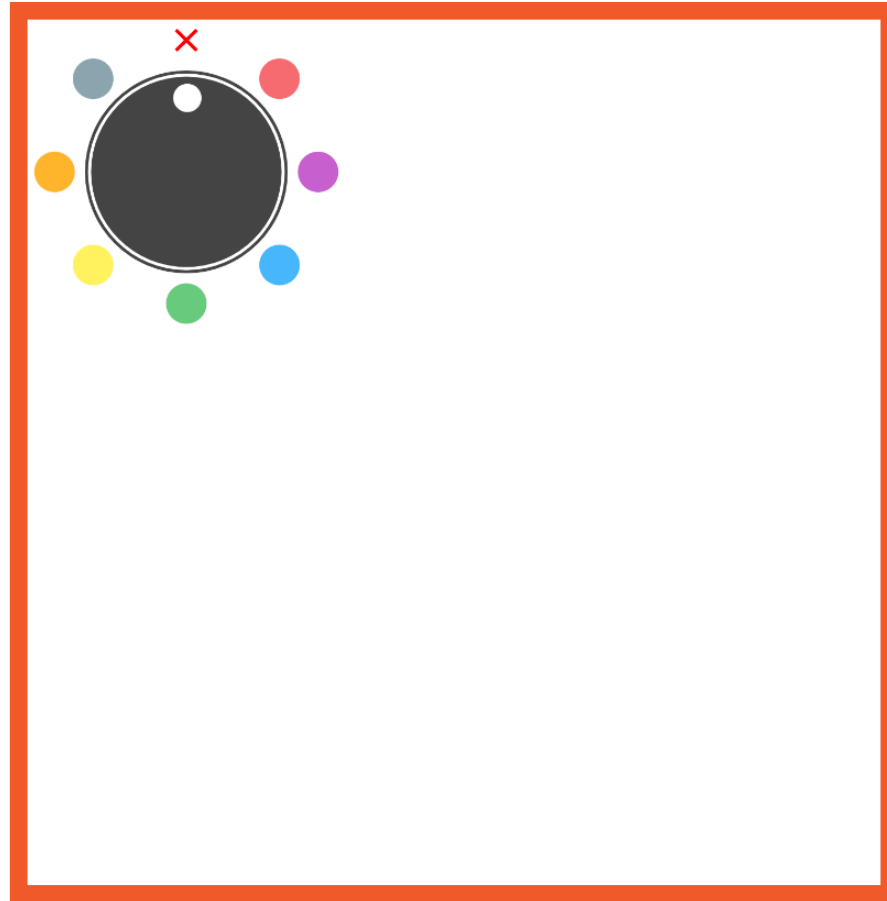
<Live Coding>



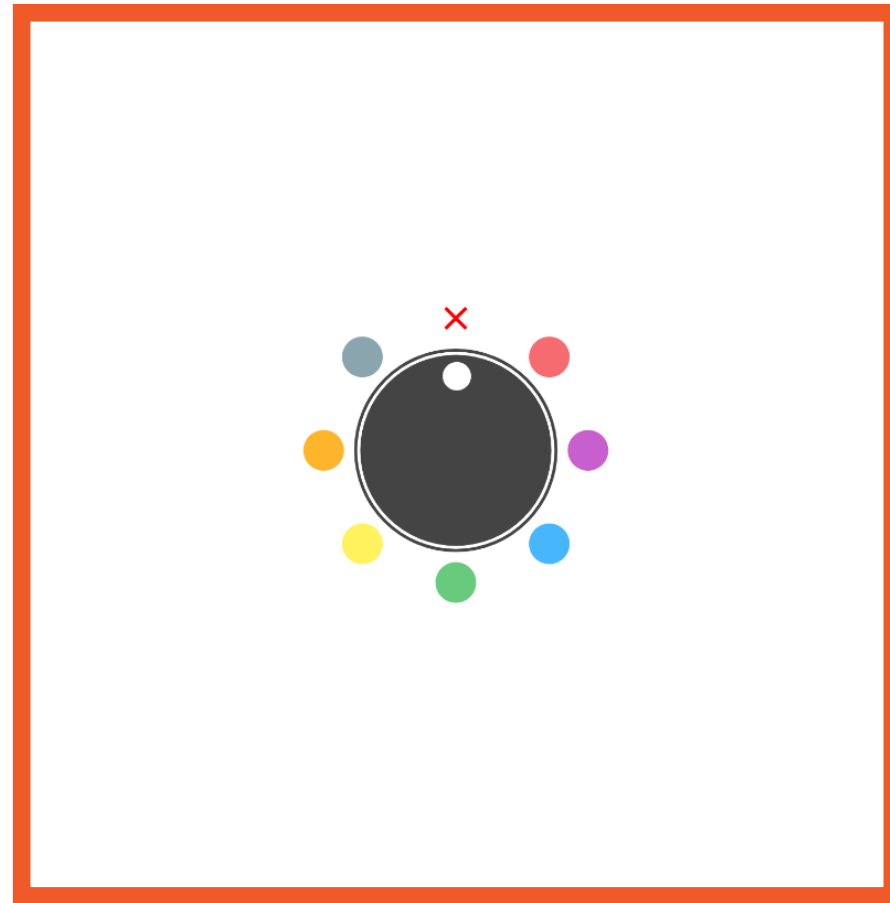
Padding and Positioning



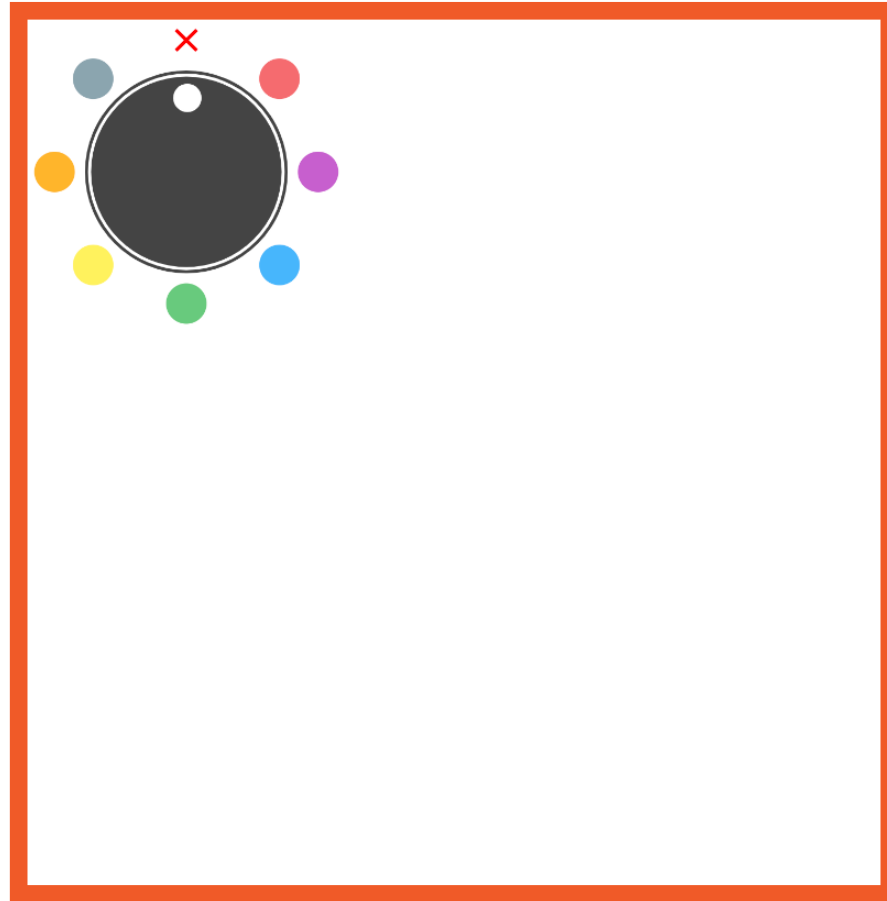
Padding and Positioning



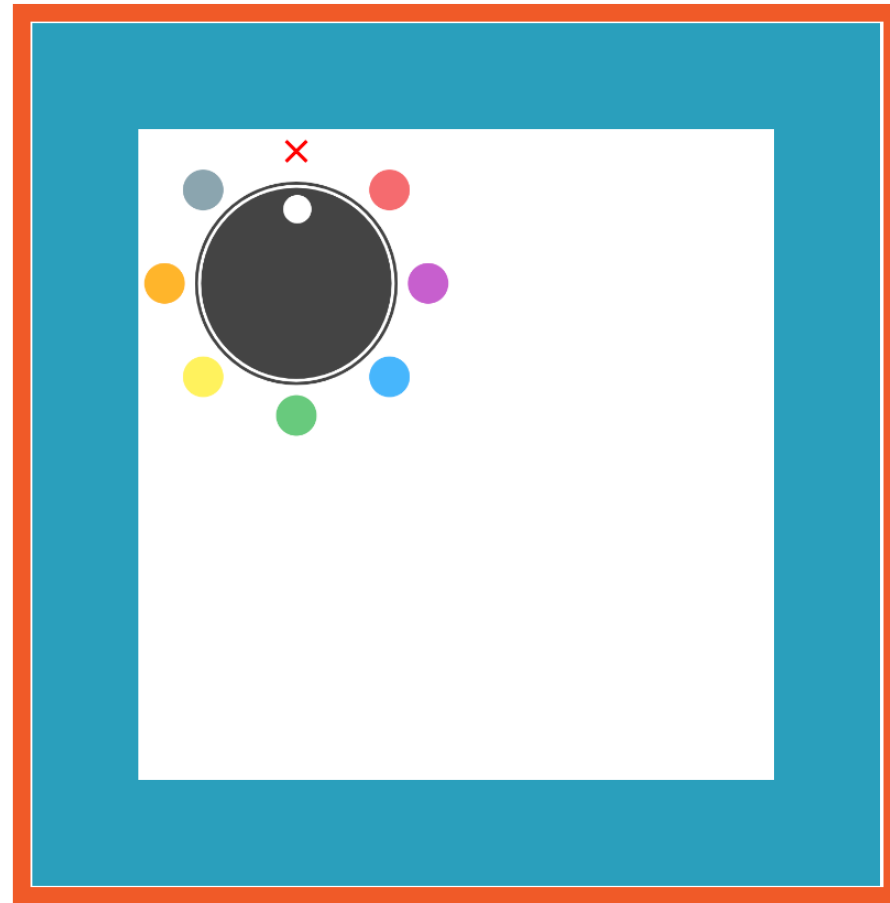
Padding and Positioning



Padding and Positioning

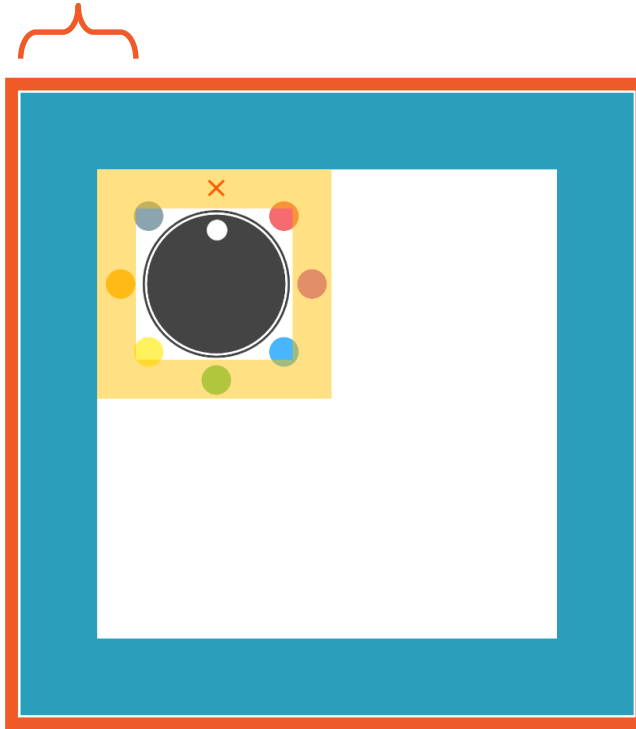


Padding and Positioning



Padding and Positioning

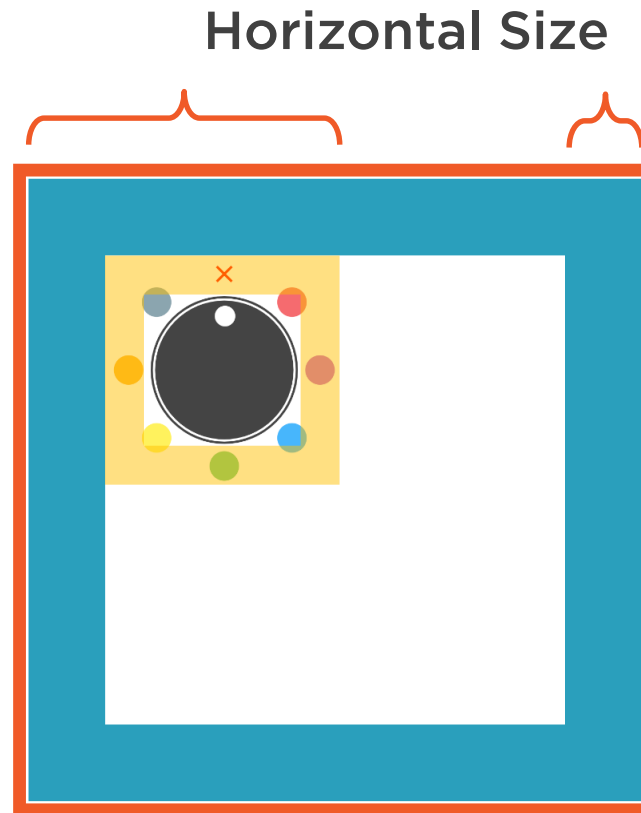
Total Left Padding



`totalLeftPadding`



Padding and Positioning

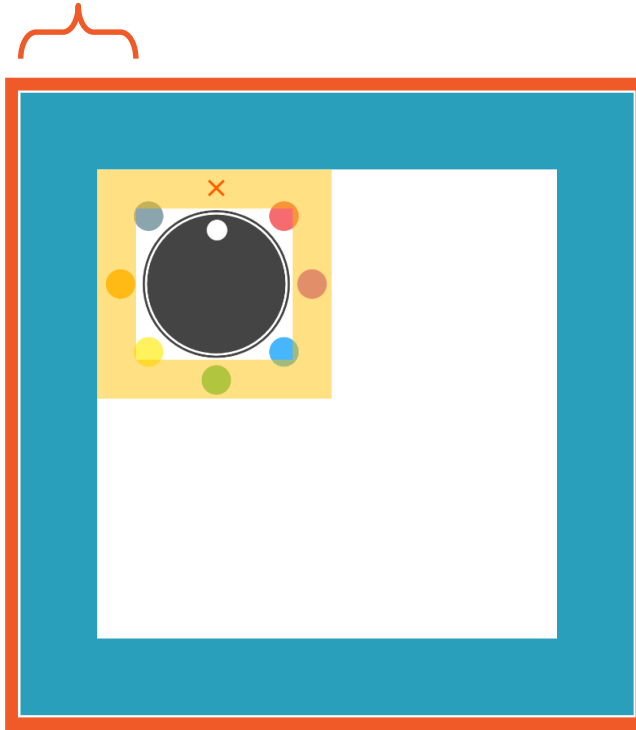


`totalLeftPadding + (horizontalSize`



Padding and Positioning

Total Left Padding

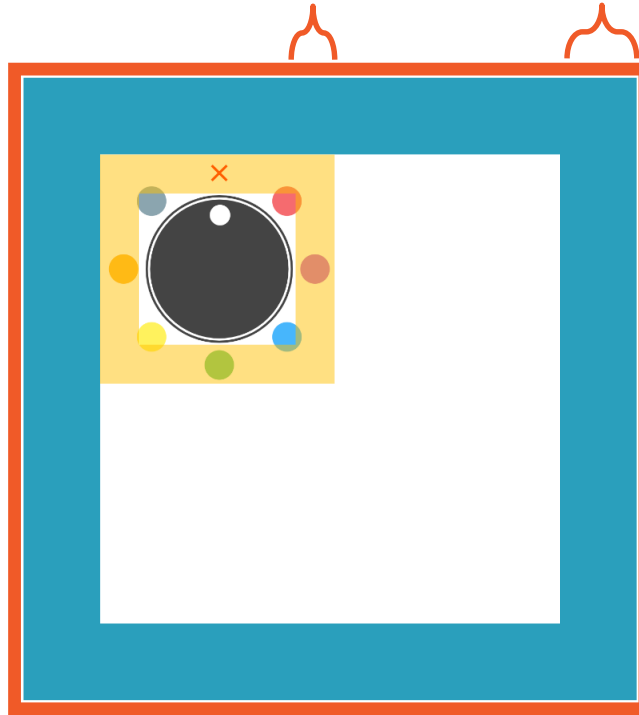


`totalLeftPadding + (horizontalSize - totalLeftPadding`



Padding and Positioning

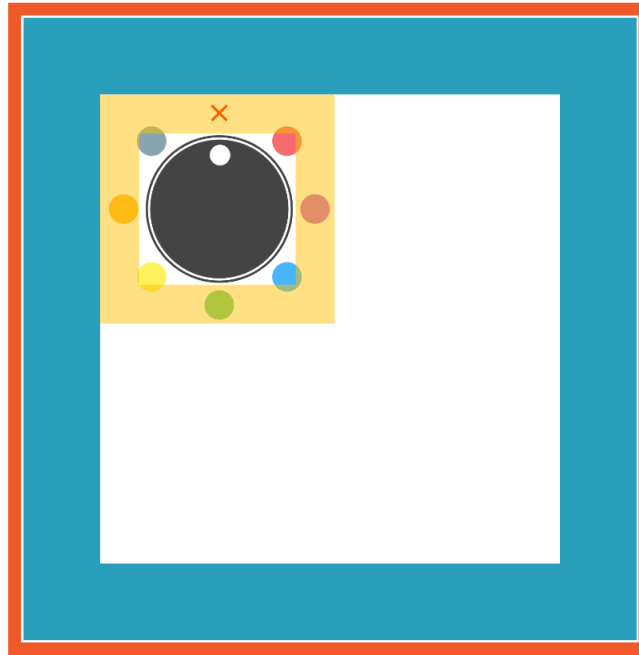
Total Right Padding



`totalLeftPadding + (horizontalSize - totalLeftPadding - totalRightPadding)`



Padding and Positioning



$\text{totalLeftPadding} + (\text{horizontalSize} - \text{totalLeftPadding} - \text{totalRightPadding}) / 2$



<Live Coding>



Summary



Intro to completely custom views

Creating a view from scratch

Drawing with math



Next Up: Custom View Positioning
and Sizing

