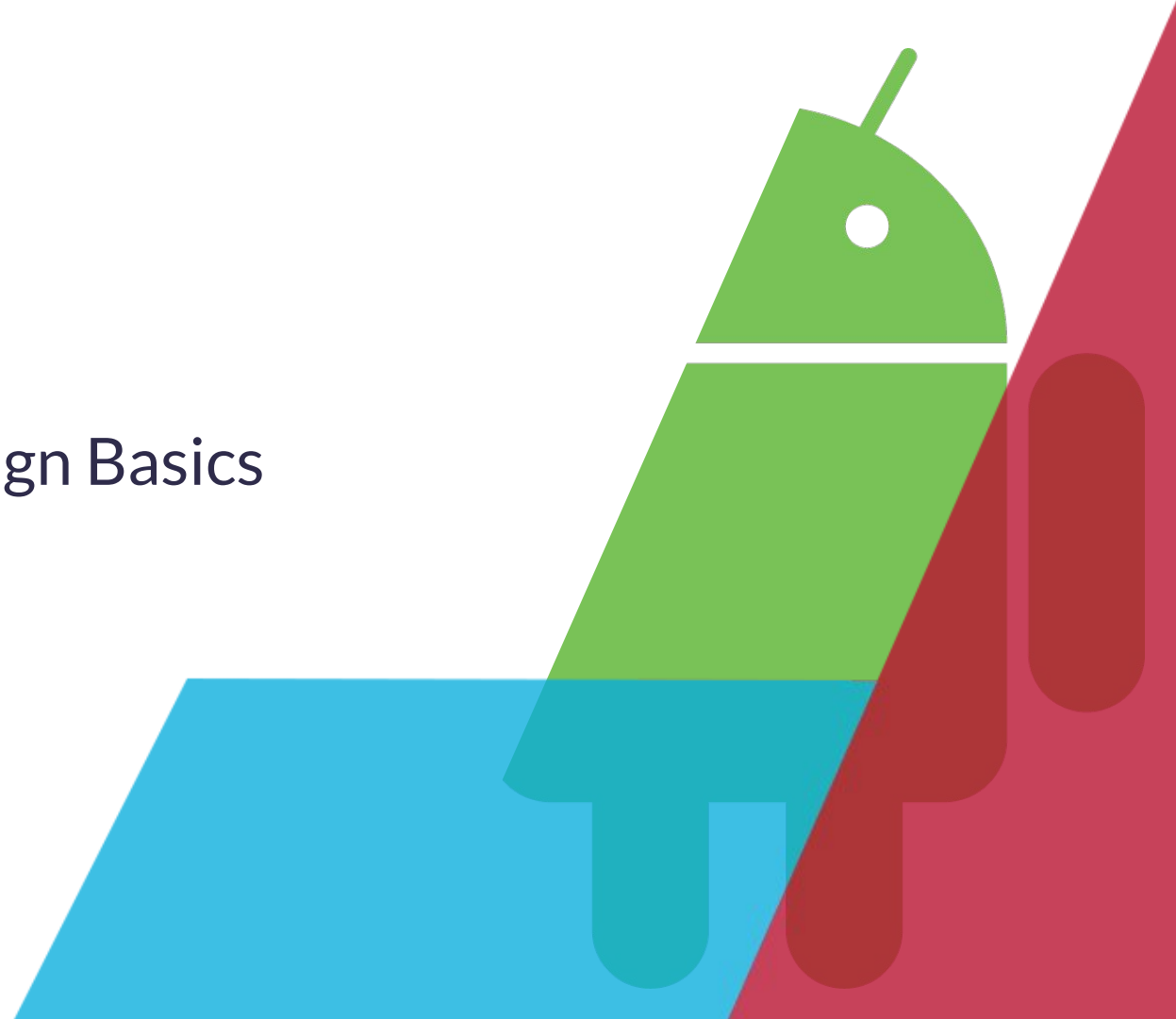
Material Design Basics



Upon completion of this module, a student will be able to

- understand the main tenets of Material Design
- build layouts with proper spacing
- use color to improve app design
- translate wireframes into Android designs

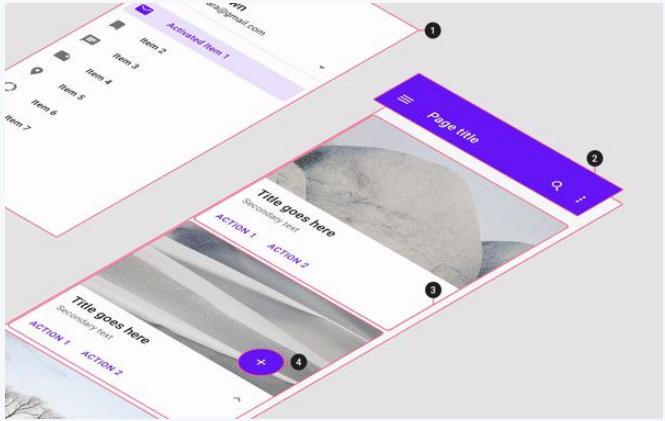
Project

- Task
  - Take a (very) rough wireframe drawing and other provided assets to build the UI for a simple news reader app.
- Repo
  - https://github.com/LambdaSchool/and-design-assignment-newsreader
- Challenge
  - Continue working to polish your app. Add activities that you think would be good additions.

Lambda
A Student Can
understand the main tenets of
Material Design

Material Design

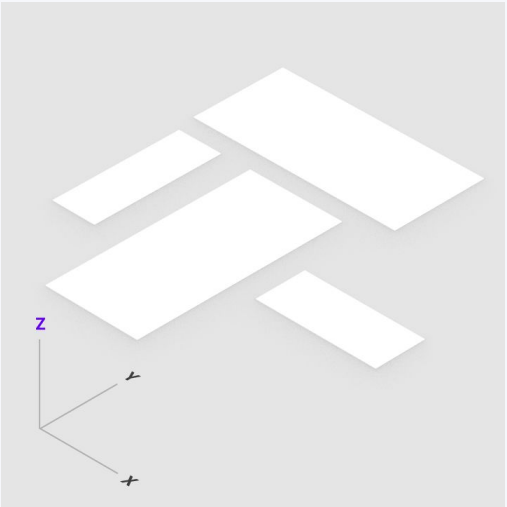
- Views made of digital paper
  - Mimics behavior of physical paper
- Content is ink on that paper
- Papers are stacked on top of eachother
  - Drop shadows show elevation



https://www.youtube.com/watch?v=rrT6v5sOwJg

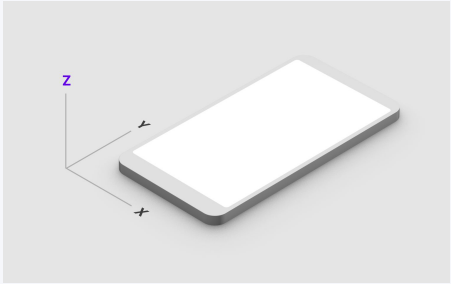
Materials (Paper)

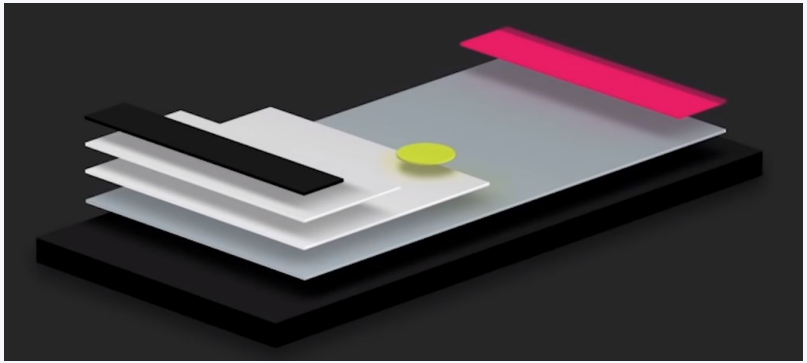
- Materials can vary in height and width, but the thickness must be uniform
- They are solid and can't pass through each other
- They are digital and can change size and shape



Depth (Elevation)

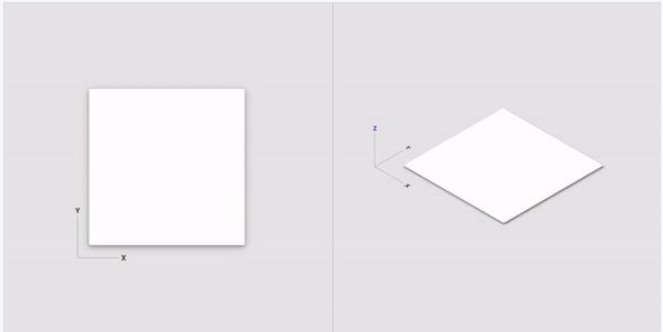
- The virtual UI space is between the back and front of the device
- Digital papers are staged inside of this zone
- Expressed with Shadows
- Can be expressed with surface fill colors





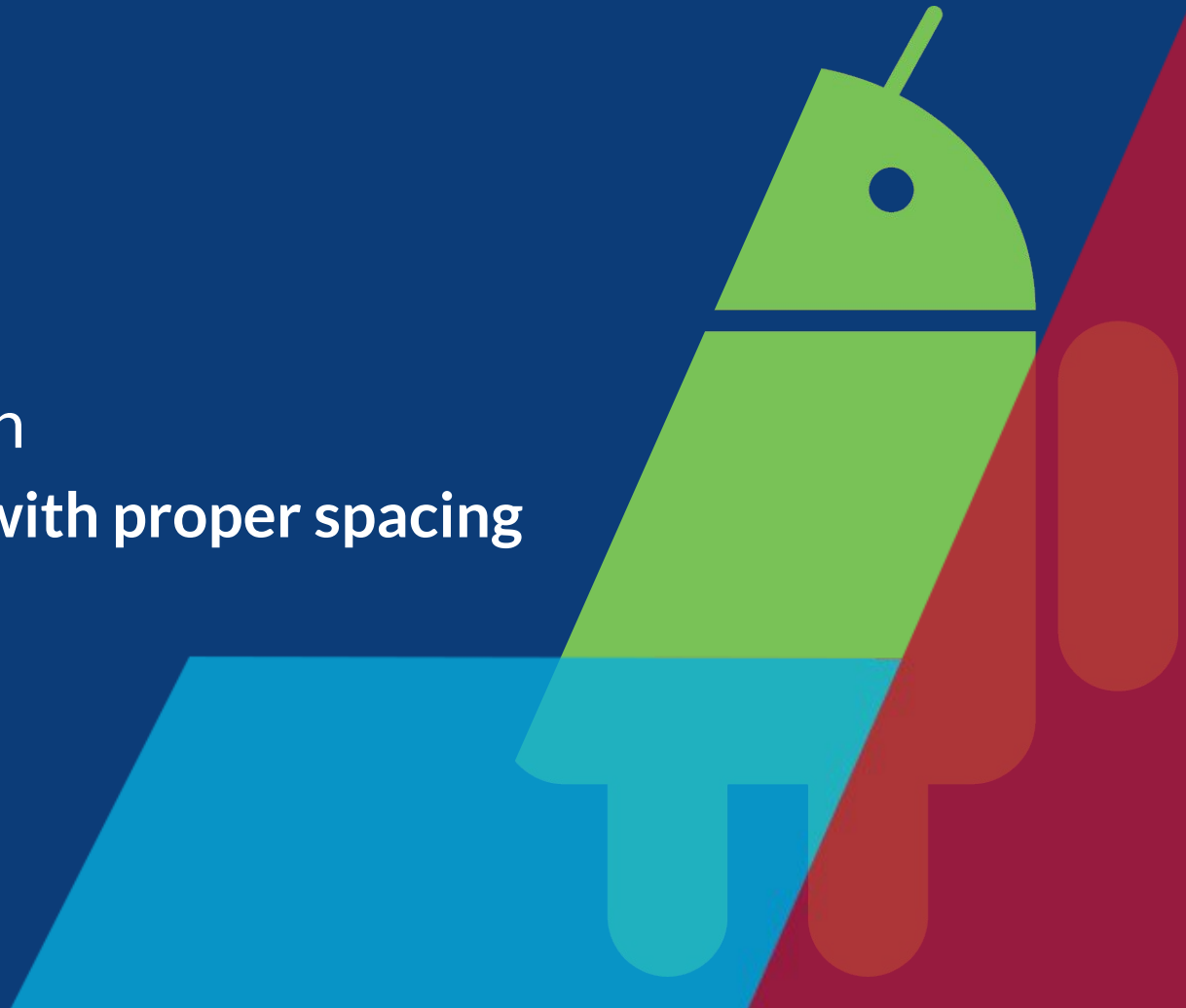
Content (Ink)

- Behavior can be independent of or dependent on the material
  - Can move around on the material
- Does not add any thickness



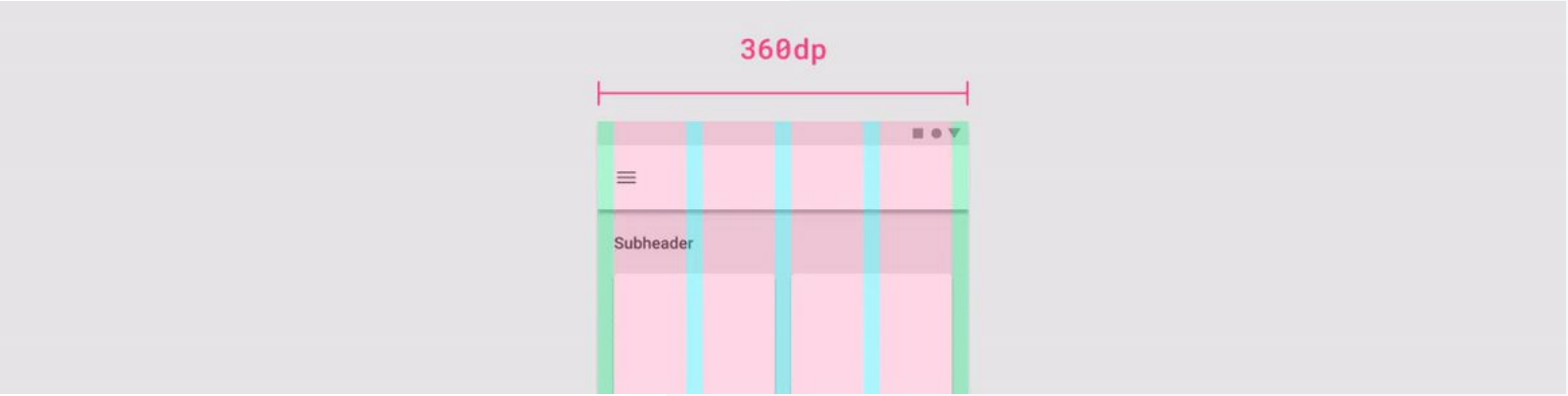
A Student Can

build layouts with proper spacing



Breakpoints

- Screen size categories

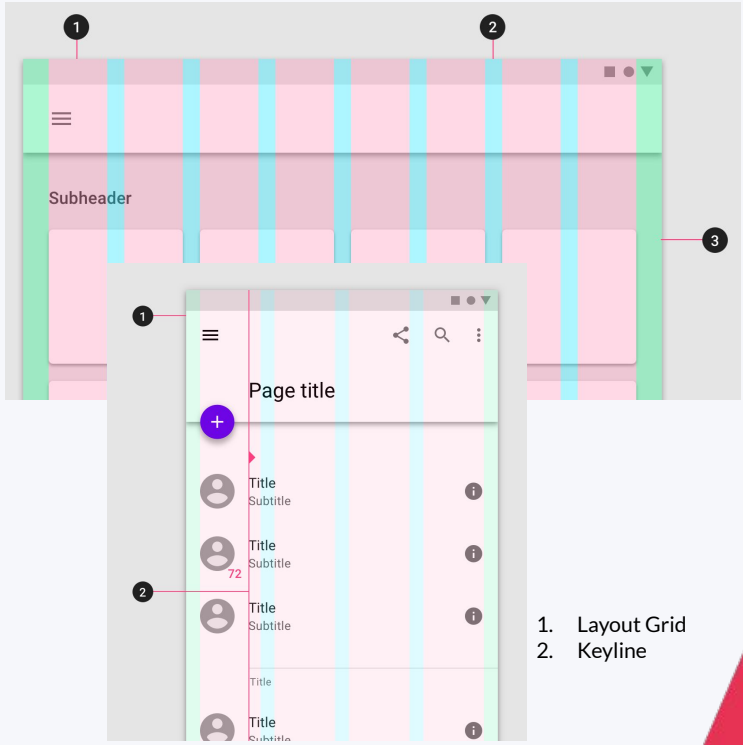


https://material.io/design/layout/responsive-layout-grid.html#breakpoints

Layout

- Structure
  - Most content on 8dp lines
  - Smaller things on 4dp lines
- Columns
  - Separated by percent rather than fixed values
- Gutters
  - Space between content/columns
- Margins
  - Space between content and edges
- Keyline
  - Non-column alignment

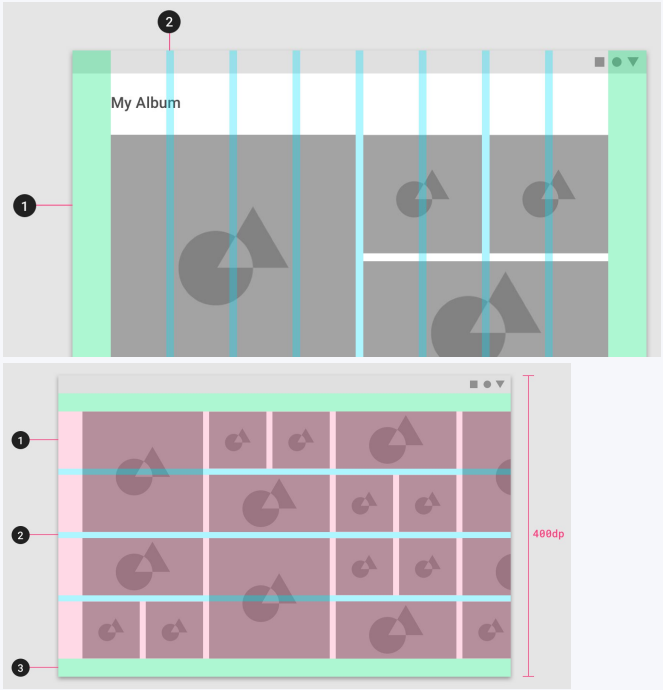
1. Columns
2. Gutters
3. Margins



1. Layout Grid
2. Keyline

Columns

- Content can span multiple columns
- Generally begin on one edge and end on another
- Can be vertical or horizontal



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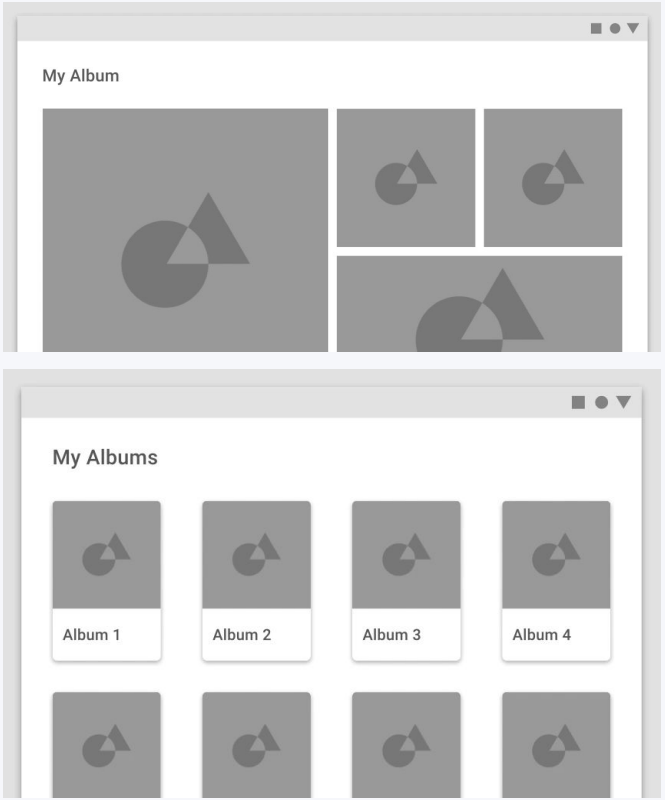
Gutters

- Can be different size for different layouts
- Spacing communicates relationships
  - Less space = Closer Relationship
  - More space = More Individuality
- Don’t leave too much space, gutter less than column



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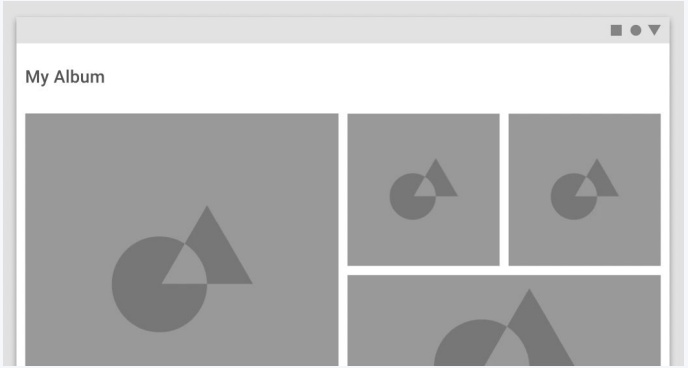
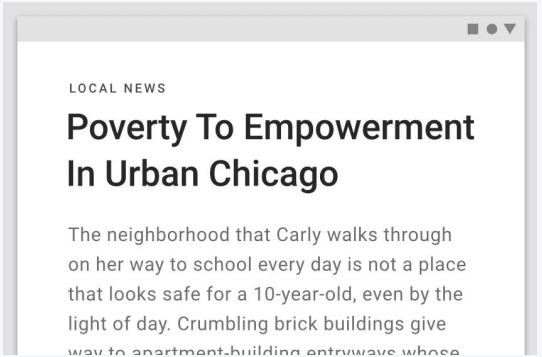
Margins

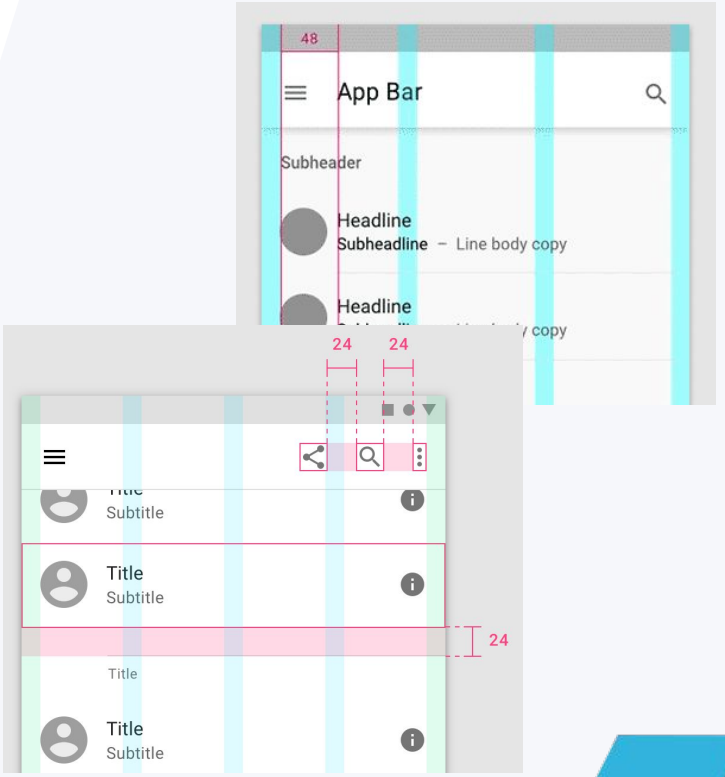
- Gives space from screen edge
- Can be different size than gutters
- For text, target 40-60 characters per line
- For other content
    - Greater than or equal to the gutter size
    - Based on content and columns





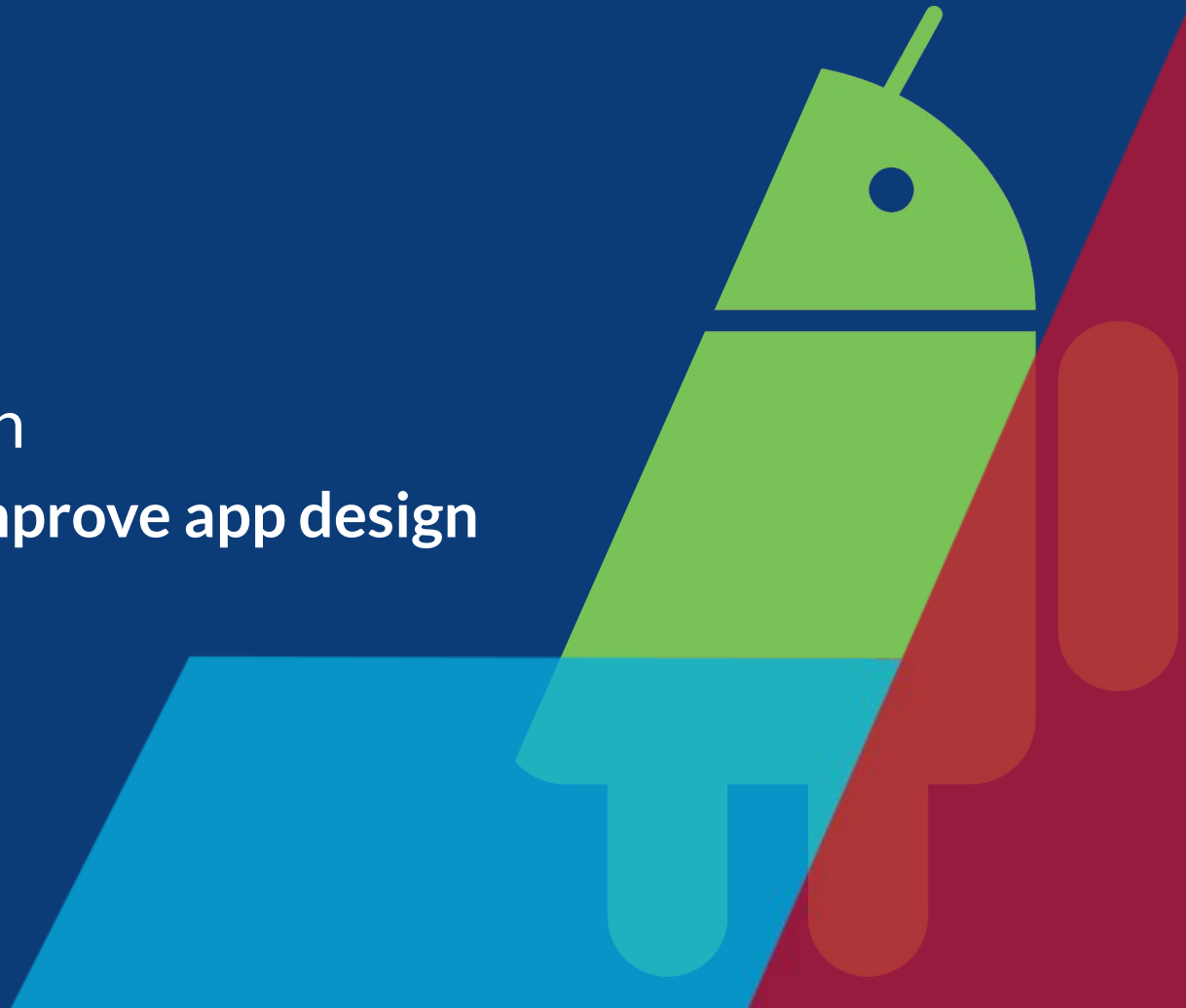
Spacing

- Keylines
  - Elements aligned outside of grid
  - Add Consistency
- Padding
  - Space between elements
  - Alternative to Keyline spacing



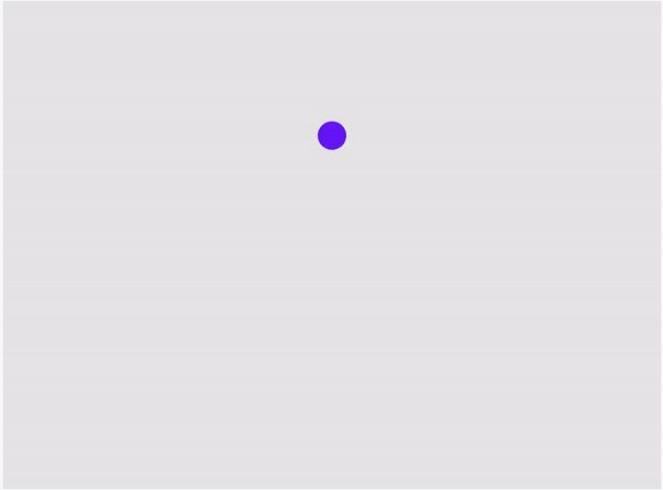
A Student Can

use color to improve app design



Color System

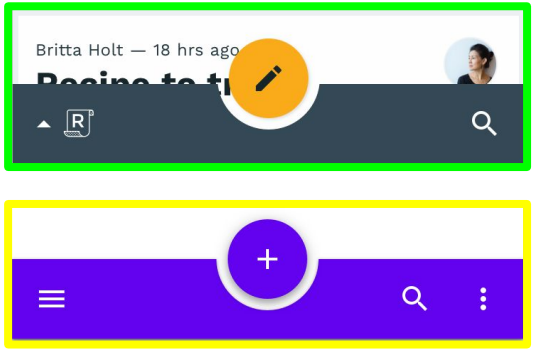
- Baseline colors
- Primary color
  - Most frequent
  - Dark and light variants
    - Create contrast
  - 500 Value
- Secondary color
  - Accent
- Surface, background, and error



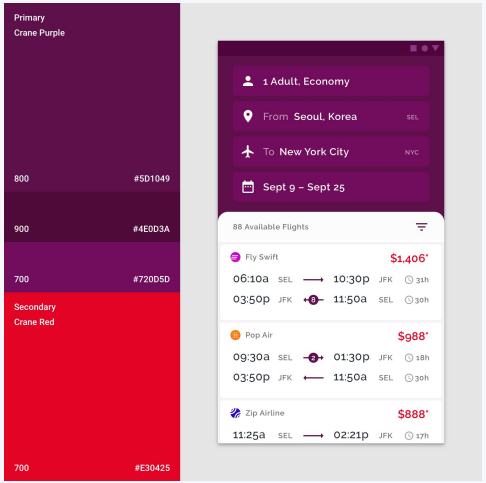
https://material.io/design/color/the-color-system.html

Color Usage

- Show Contrast



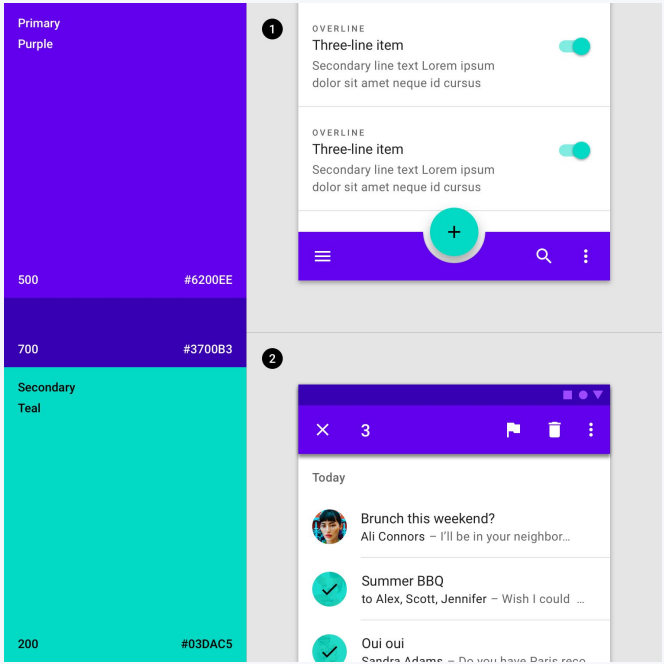
- Separate layers



https://material.io/design/color/applying-color-to-ui.html

Highlight

- Action icons
- Feature discovery
  - Draws attention
- Emphasize brand



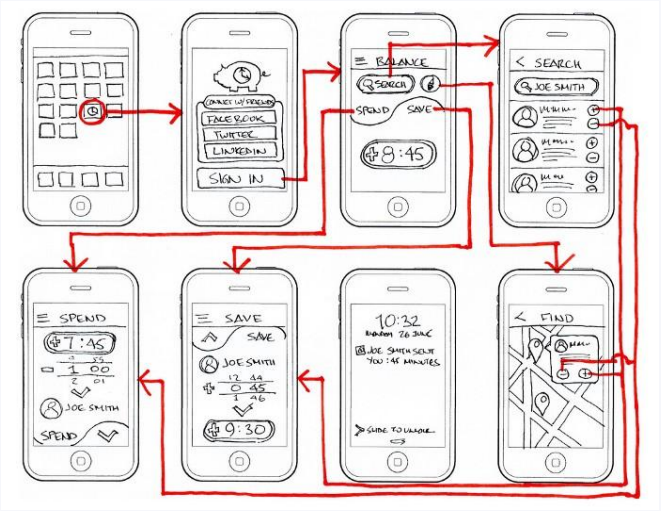
https://material.io/design/color/color-usage.html

A Student Can

translate wireframes into Android designs

Wireframes

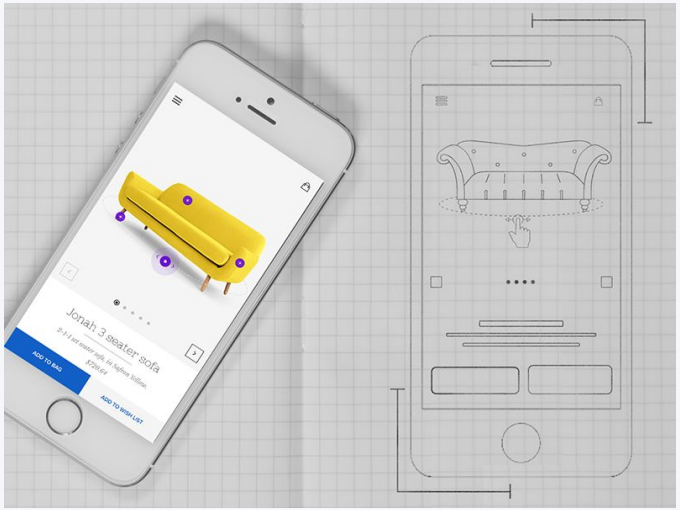
- App Floor plan
- Reference for design
- Focused on functionality
- Easy to change and update
- Platform agnostic



Source: https://blog.prototypr.io/why-you-shouldnt-skip-your-wireframing-1f7a70d5c125

Converting a Wireframe

1. Finalize wireframe
2. Rough out buttons and layout
3. Refine layout
4. Add coloring



Source: https://dribbble.com/Bingi