Mobile Application Development – IT2010

Lecture 3 - Mobile Interface Design Concepts and UI/UX Design Fundamentals

"Practice safe design: Use a concept.”

-Petrula Vrontikis-
Graphic Designer and Lynda Author

Learning outcomes of the lecture

At the end of this Lecture students will be able to

- Define the terms UI and UX

- List the principles of user interface design

- Categorize different UI components in Android

- Recognize the important of UI Evaluation

Mobile Interface Design

- Interface design add meaning and value to the application

- Design will become attractive if universality design principles are applied.

- Designers face thread when many requirements are unclear and uncertain.

Are the above mentioned two words express the same idea???

Mobile UX –User Experience

- Enhancing user satisfaction of an app, while involving the user's opinions and feelings _before_, _during_, and _after_ their interaction with an app.

- Includes all aspects of the end-user's interaction with the company, and its products/services.

Cont'd… - Why UX in mobile?

UX of a mobile application influences how users observe it

Ex:

- Does app provides them value?
- Is the app easy to use?
- Does it help them to fulfill their goal?

Mobile UI – User Interface

- User interface is everything that the user can see and interact with

- In simply terms, "the design of the user interface is not the appearance of a product, but how it works"

- Interface design is the first thing that users will see, therefore, it directly effects the user's view

Cont'd… - Why UI in mobile?

Visual elements greatly impacts an emotional connection with the user

Ex:

- Does the color attract the user?
- Are the elements are placed properly?

Principles of Mobile User Interface Design

Which one is better?
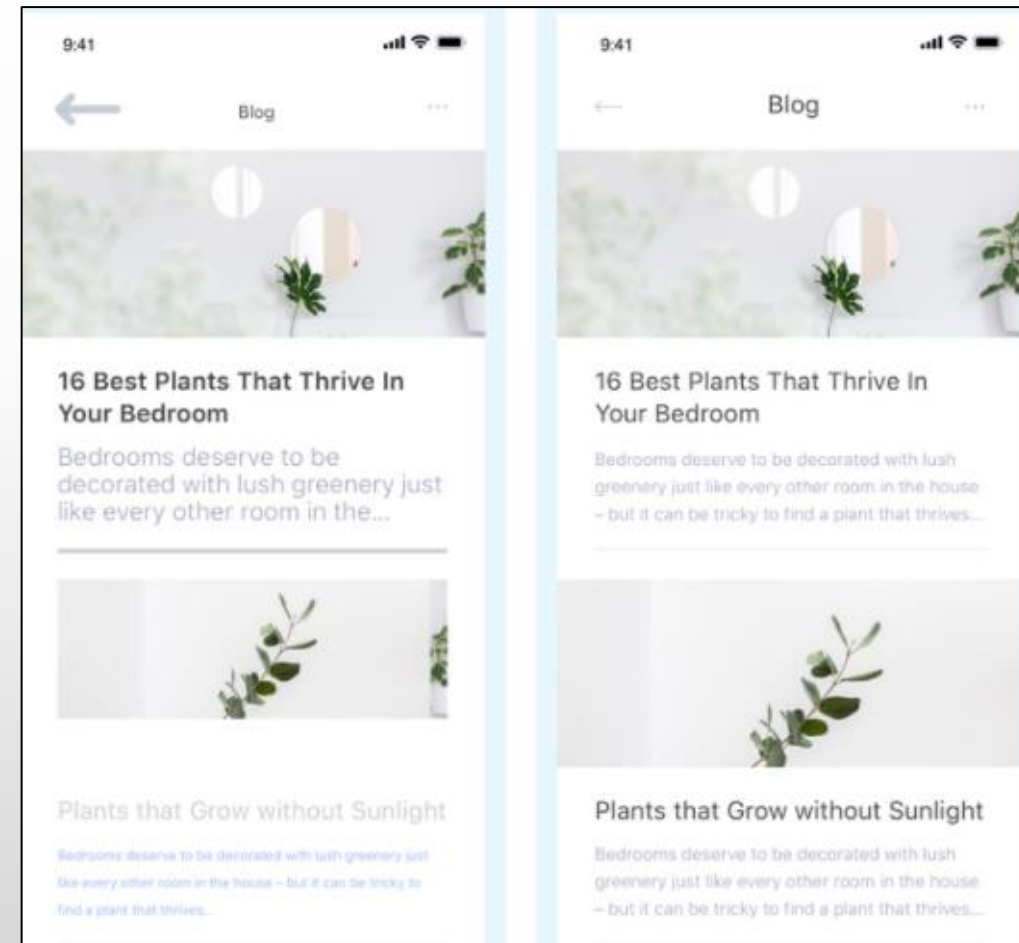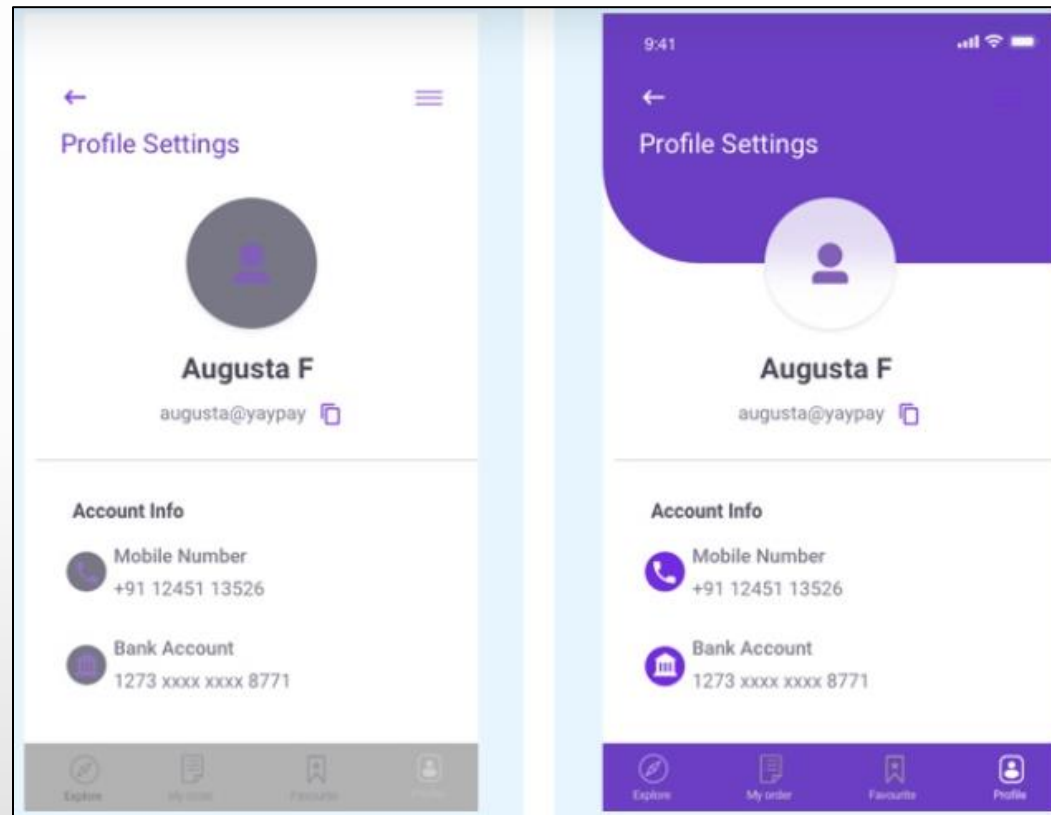
Principles of Mobile Interface Design

Mobile Mindset
- Be Focused
- Be Unique
- Be Charming
- Be Considerate

Mobile Contexts
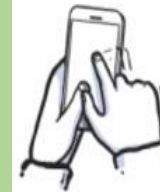- Bored
- Busy
- Lost

Global Guidelines
- Responsiveness
- Polish
- Thumbs
- Targets
- Contents
- Controls
- Scrolling

Principles of Mobile Interface Design

Navigation Models
- None
- Tab bar
- Drill down

User Inputs
- Keyboard variations
- Auto correction
- Device Orientation

Gestures
- Invisible
- Two hands
- Nice to have
- No replacement

Principles of Mobile Interface Design

Orientation

Communication
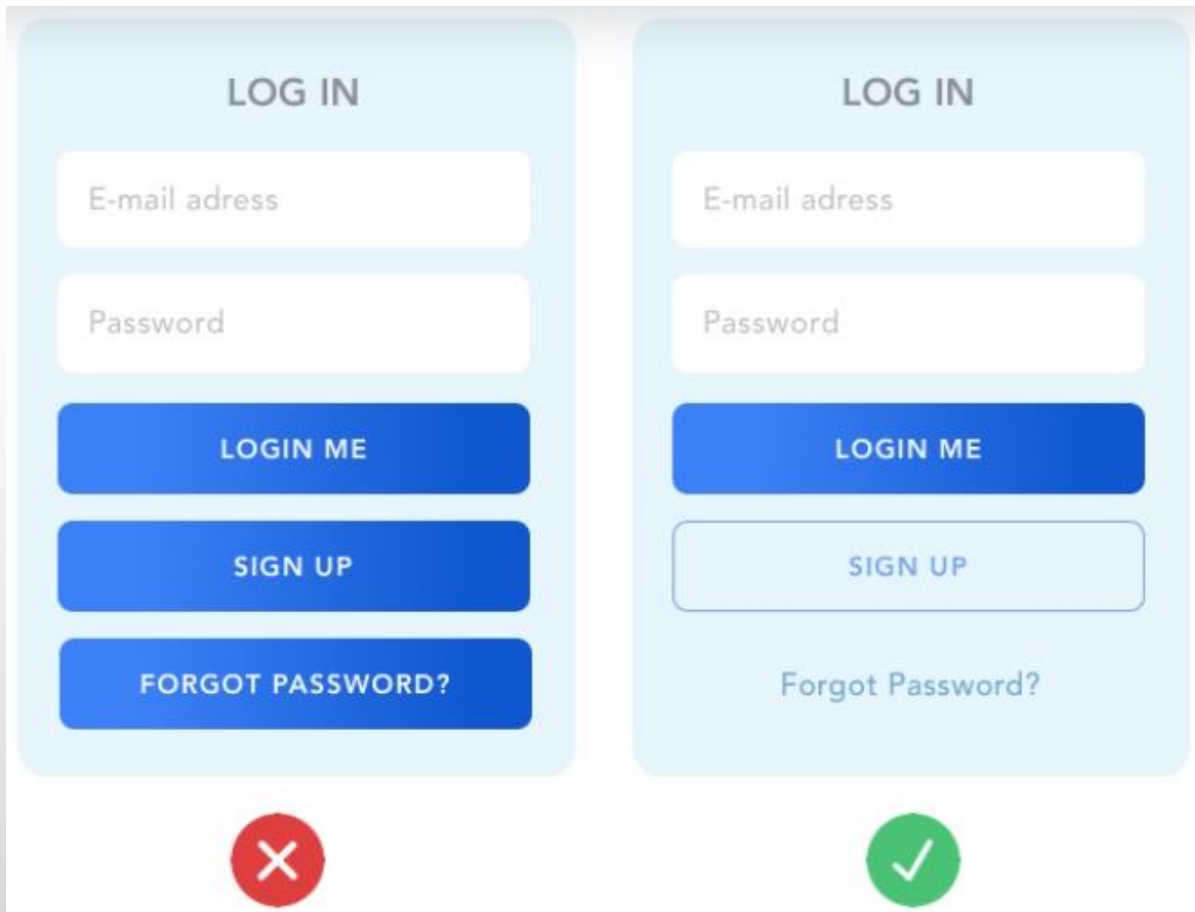- Provide feedback
- Model alerts
- Confirmations

Launching

First Impressions
- Icon
- First Launch

Text Hierarchy

Attractive

- Little distinction between primary and secondary buttons.
  - ✓Different visual weight
  - ✓Strong colors

Low quality images
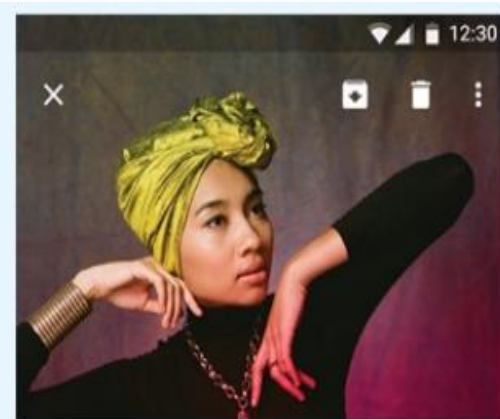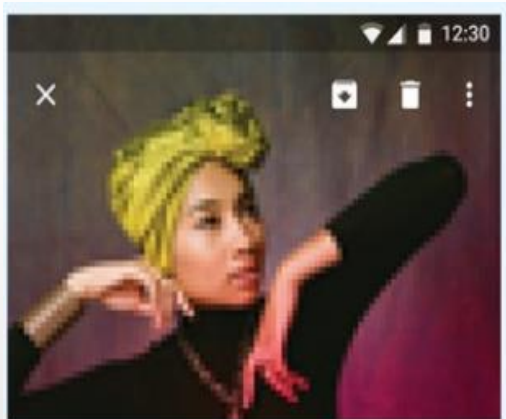
Confusing forms

Cont'd…

Principles of Mobile Interface Design:

Reference: https://www.youtube.com/watch?v=XS0Qd7hLPhw

Mobile UI Components

Mobile UI components Based on Android

- Android provides a variety of pre-built UI components such as,
  - **Layouts**
  - **Notification**
  - **Menus**
  - **Dialogs**
  - **Toast**

    and etc.
  - **Other common elements** (Buttons, Text fields and etc,)

Cont'd…

- A layout defines the structure for a user interface in your app

  - **Linear Layout**
    This layout aligns all children in a single direction, vertically/horizontal
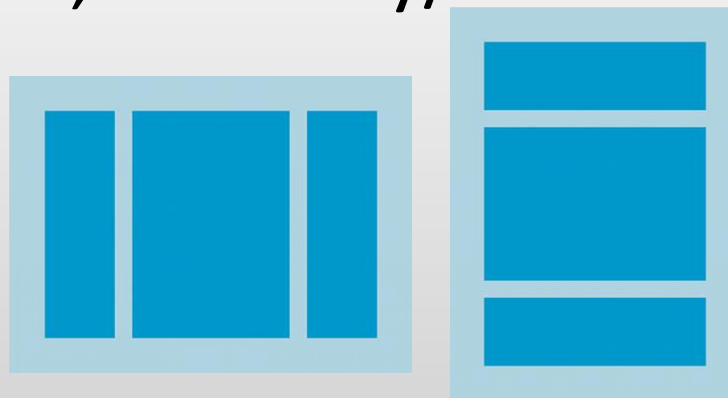
Cont'd...

- **Relative Layout**

  displays child views in relative positions to,

  - Sibling elements
  - Parent

Cont'd...

- **Constraint Layout**
  - This layout provide feature to position and size widgets in a flexible way

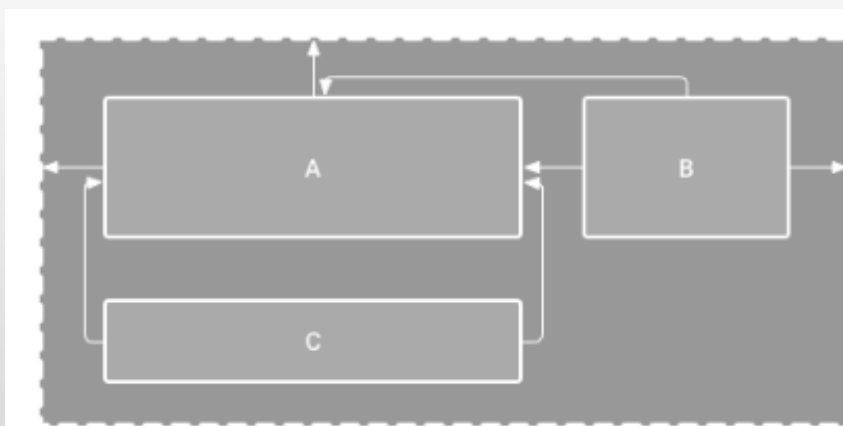 - Works similar to relative layout but more flexible than that.

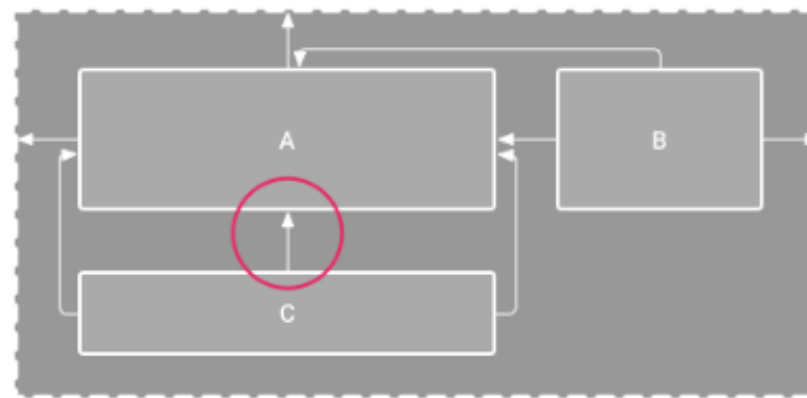Figure 1. The editor shows view C below A, but it has no vertical constraint

Figure 2. View C is now vertically constrained below view A

Reference: https://developer.android.com/training/constraint-layout/

Cont'd...

Other available layouts,

- **Adapter View**

- **Grid View**

- **Table Layout**

- **Absolute Layout**

- **Frame Layout**

Cont'd... Notification

- A message displays outside the app's UI to provide the user with,

  Reminders

  Communication from other people

  Timely information from the app

- Users can tap the notification to open an app/take an action directly from the notification
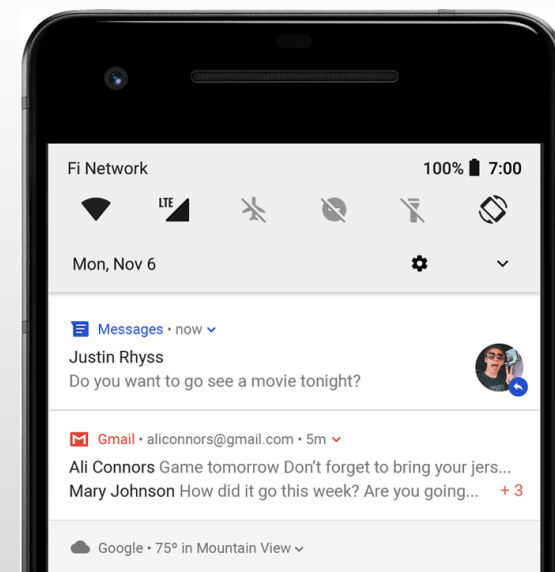
Reference:
https://developer.android.com/images/ui/notifications/notification-drawer_2x.png
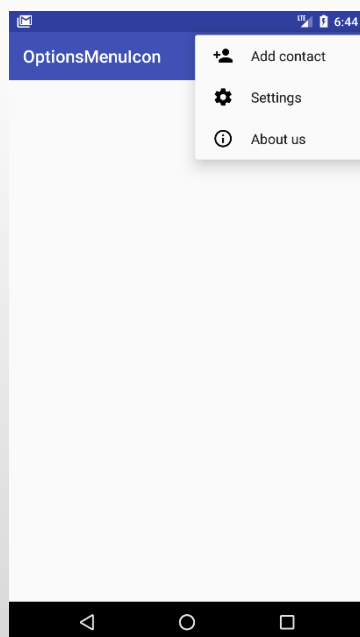
Cont'd... Dialogs

- Small window that prompts
  the user to make a decision before they
  can proceed.

- Dialog box does not fill the screen

- Consists of subclasses
  - AlertDialog
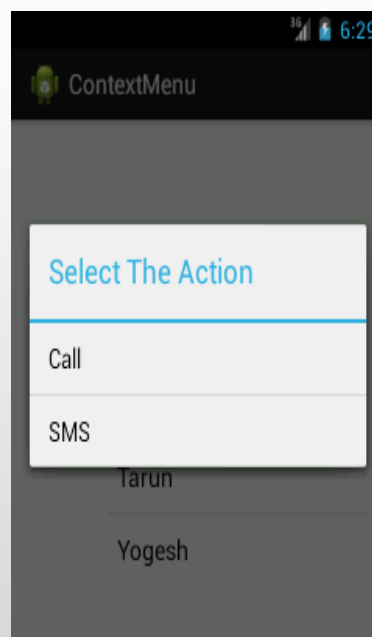 - DatePickerDialog/TimePickerDialog

Reference: https://developer.android.com/images/ui/dialogs.png
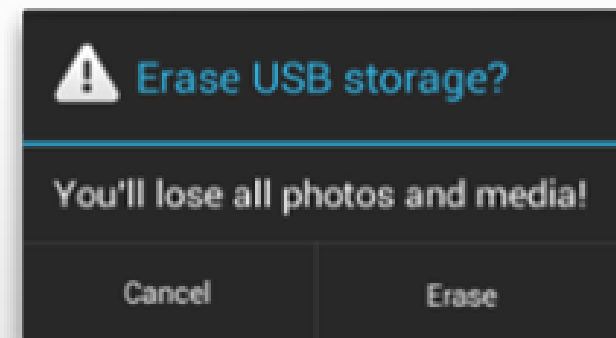
Cont'd... Menus

- This is a common component in many application, there are three standard menus,
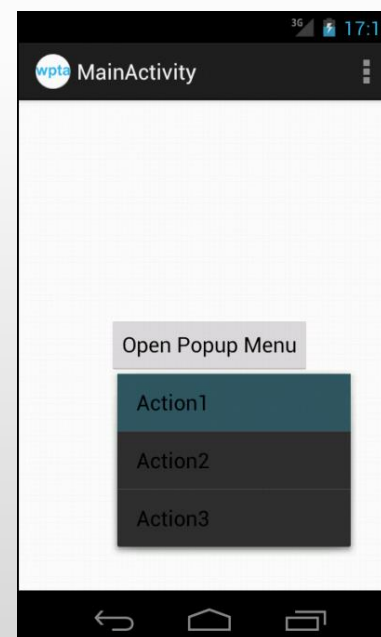
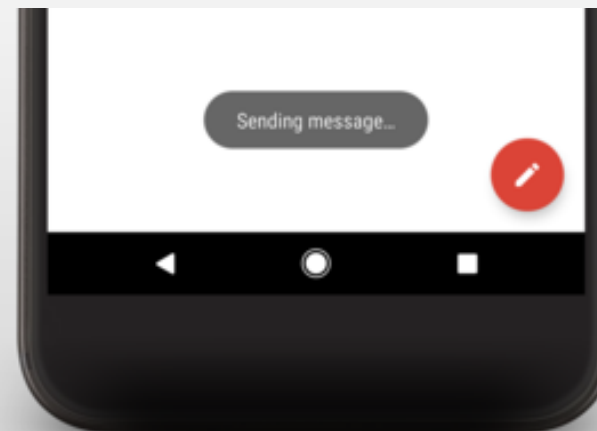**Options menu**   **Context menu**   **Popup menu**

Reference:
http://wptrafficanalyzer.in/blog/wp-content/uploads/2012/07/popup_menu_demo.png
https://www.codingdemos.com/wp-content/uploads/2017/10/Android-Options-Menu-Icon.png

Cont'd... Toasts

- Provides simple feedback about an operation.

- Only uses the space required for the message while the current activity remains visible and interactive.

- Toasts automatically disappear after a timeout.

References

1. https://clearbridgemobile.com/mobile-app-design-fundamentals-user-experience-user-interface/

2. https://developer.android.com

3. https://www.tutorialspoint.com

Thank You