

# Android Resources

## Group 5

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## Chapter objective

Learn about different resources, how to use them in an Android application

### Basic concepts:

- Resources are things embedded (bundled) into the app
- Stored in `res/` directory
- Accessible through code: `R.<category>.<resourceName>`

## I. Layouts

### Definition:

- ViewGroup is the base View class for layouting in Android
- Layout is a way to organise Views
- Can be created by code or XML files in `res/layout`
- Has hierarchical structure and can be nested

### Layout XML:

- Containers (ViewGroups) contain Views, required `layout_width`, `layout_height`
- Adaptive Layout: Use different layout XMLs in different directories
  - ✦ Tablet: `layout-large`, `layout-xlarge`
  - ✦ Phone: `layout-normal`
  - ✦ Small: `layout-small`
  - ✦ Orientation: `-land`, `-port`
- Example loading XML layout:

```
// Activity
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_layout);
}
// Fragment
public View onCreateView(LayoutInflater inflater,
                        ViewGroup container,...) {
    // Inflate the layout for this fragment
    return inflater.inflate(R.layout.fragment_layout,
                        container, false);
}
```

**Popular Layout classes:**

- **FrameLayout**
  - ✦ Can contain multiple children (Views)
  - ✦ Multiple layers, z-based order. First child at the bottom
- **LinearLayout**
  - ✦ One direction (Horizontal or Vertical)
  - ✦ Use `layout-weight` for stretching based on orientation
- **RelativeLayout**
  - ✦ Multiple layers, z-based order
  - ✦ Relativity of children's position and size to parent or others