

Welcome to Android Tutorial

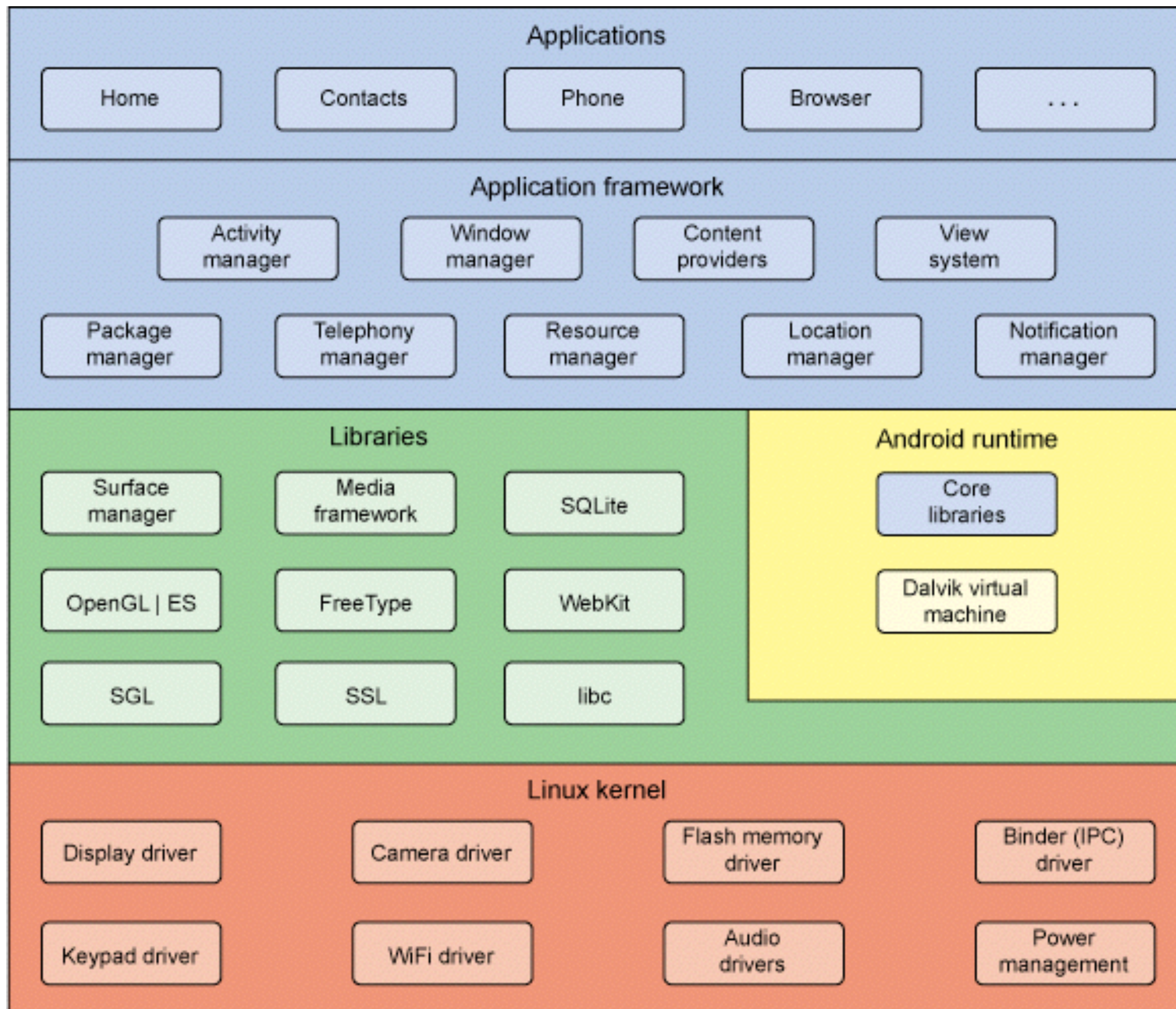


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Your Android Trainer

What is Android?

Android Stack



Android Components

- **Activities** – visual user interface
focused on a single thing a user can do
- **Services** – no visual interface – they
run in the background
- **Broadcast Receivers** – receive and
react to broadcast announcements
- **Content Providers** – allow data
exchange between applications

Activity

- Basic component of most applications
- Most applications have several activities that start each other as needed
- Each is implemented as a subclass of the base Activity class

Service

- Does not have a visual interface
- Runs in the background indefinitely
- Examples
 - Network Downloads
 - Playing Music
 - TCP/UDP Server
- You can bind to a an existing service and control its operation

Broadcast Receiver

- Receive and react to broadcast announcements
- Extend the class `BroadcastReceiver`
- Examples of broadcasts:
 - Low battery, power connected, shutdown, timezone changed, etc.
 - Other applications can initiate broadcasts

Content Provider

- Makes some of the application data available to other applications
- It's the only way to transfer data between applications in Android (no shared files, shared memory, pipes, etc.)
- Extends the class `ContentProvider`;
- Other applications use a `ContentResolver` object to access the data provided via a `ContentProvider`

Intent

- An intent is an **Intent** object with a message content.
- Activities, services and broadcast receivers are started by intents. ContentProviders are started by ContentResolvers:
 - An **activity** is started by `Context.startActivity(Intent intent)` or `Activity.startActivityForResult(Intent intent, int requestCode)`
 - A **service** is started by `Context.startService(Intent service)`
 - An application can initiate a **broadcast** by using an Intent in any of `Context.sendBroadcast(Intent intent)`, `Context.sendOrderedBroadcast()`, and `Context.sendStickyBroadcast()`

Questions?