Welcome to Android Tutorial



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Your Android Trainer

What is Android?

Android Stack

Applications			
Home	Contacts	Phone	Browser
Application framework			
Activity Window Content View manager providers system			
Package manager	Telephony manager	Resource manager	Location Notification manager
Libraries			Android runtime
Surface manager	Media framework	SQLite	Core
OpenGL ES	FreeType	WebKit	Dalvik virtual machine
SGL	SSL	libc	
Linux kernel			
Display driver	Canaca dellas		memory river Binder (IPC) driver
Keypad driver	WiFi driver		udio Power management

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?