

Sub.) What is a service?

A service is one of the main components of android used for long running operations.

Sub.) What are the 2 categories of Services?

- 1.) **Started/normal Services**- start,,do work,,stop. (
- 2.) **Bounded services**- uses client server relation. Requires IPC

Sub.) What is the 2 lifecycle of a service?

For StartService() - onCreate, onStartCommand, onDestroy

For BindService() - onCreate, onBind, onUnbind, onDestroy

1.) What is interprocess communication?

Interprocess communication is the communication of threads across process boundaries.

4 means of interprocess communication is intents, messenger, binder/ibinder

2. Define each of the following and a short description of how each is implemented:

- **AIDL** - (android interface definition language) allows us to **define programming language** both the **client and service agree upon** in order to **communicate with each other**.

Implemented by creating .aidl file, then implement the interface, then expose the interface to clients.

-**Messenger (for IPC)**

Messenger allows messages to be passed across process boundaries between client and services.

Implemented with a handler and an IBinder.

Binder- Android framework and HALs now communicate with each other using binder

3. What are the restrictions for background services and what are some ways to accommodate for the restrictions?

Because backgrounds services can drain battery and other limited resources, important restrictions include **notifying the user when an app has been idling too long** and **Broadcast receivers must be explicitly defined in the code**. A good way to **get around** this is **job schedulers**.

4. What are the restrictions for broadcast receivers?

Permissions, local broadcast manager and system receivers

5. What is client/server relationships?

****sockets to Communicate****

To achieve client server relationships we use sockets to send, receive and communicate between them