

Android - Service (bound)

- An Android Service is an application component that can perform long running operations.
- By default, a service runs in the context of the UI thread. I.e., requires a thread to be created for background operations.
- A bound service performs a long running operation on behalf of a client. At the end of the operation the result is returned back to the client.
- A bound service exists as long as there is a client bound to it.
- A client can access a service running in a different process.
- A bound service is derived from class Service and needs to override method `onBind()`. The latter returns a Binder object that the client uses to interact with the service.
- The client calls `bindService()` to bind to a service. This requires a `ServiceConnection` object that is used to detect when the asynchronous connect to the service succeeded.
- A service needs to be declared in `AndroidManifest.xml` using the `<service>` tag.



Step 1: Enter value and press the "Compute" button.



Step 2: After 5 seconds the result will be displayed.

References

- General overview of [Android Services](#)
- Details of [Bound Services](#)
- [android.app.Service](#)
- [android.os.Binder](#)
- [android.content.ServiceConnection](#)

Exercise

The current implementation will destroy the FibonacciService when FibonacciActivity is destroyed. Convert FibonacciService such that it also overrides onStartCommand() for a started service. This service is a hybrid because it is both a started as well as a bound service. Hint: look at the exercise for a started service and combine it with the bounded service.