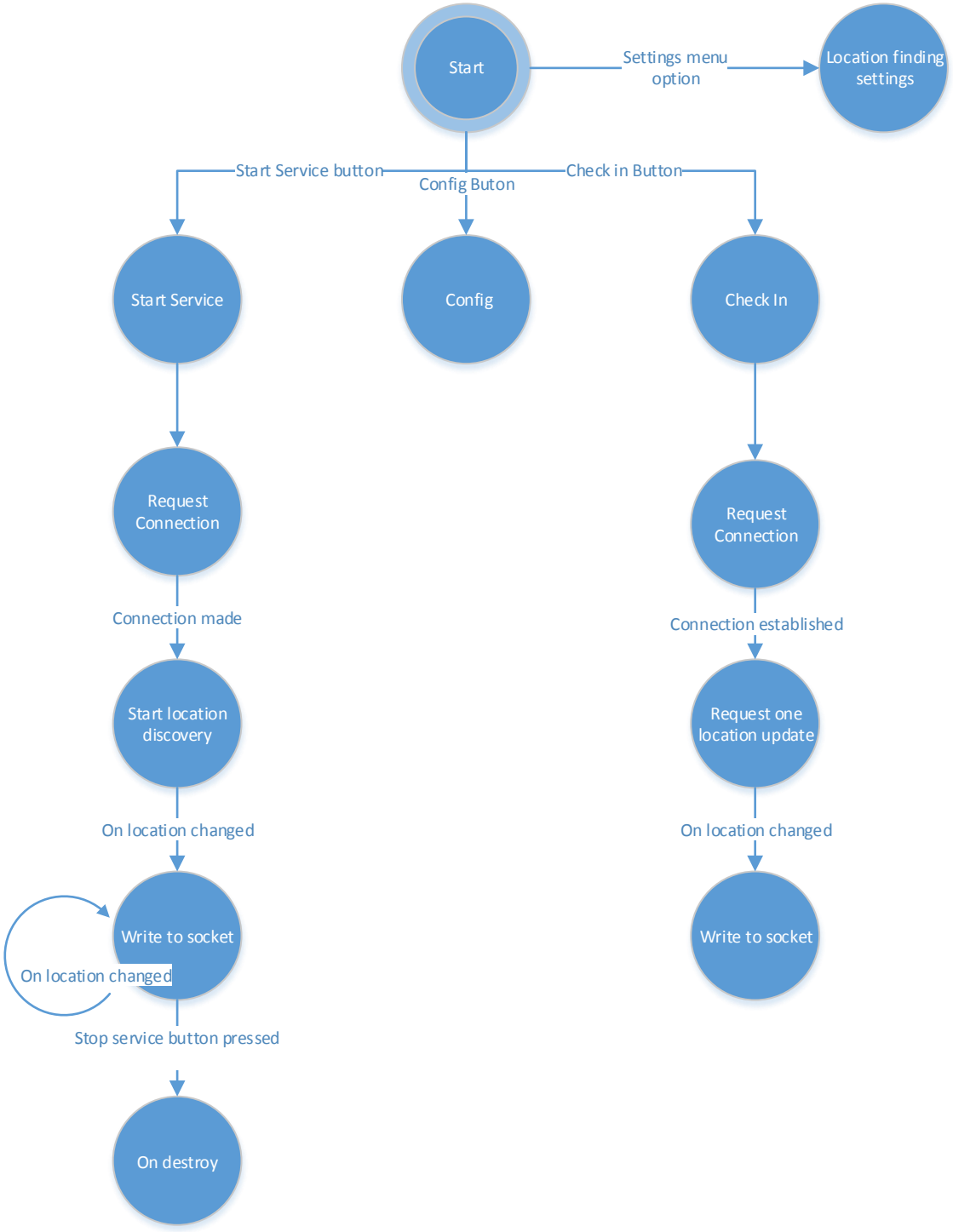
Android Design: FSM



Android Design: Pseudo-code

Start

On Create of main activity
Instantiate shared Preferences, location Manager, and the web view
Load the web view with our website

Check In

Get the device IP and MAC address
Request a connection with the server
Request a single location update

Request Connection

Get the server IP and Port from the shared preferences.
Instantiate a client socket passing the IP and Port as parameters to the constructor

Request Location update

Check enabled providers.
If network provider enabled use network provider
If GPS provider enabled but network provider is not enabled, use GPS provider
Else use the Passive provider

Instantiate a Location listener

Implement the onLocationChanged callback

Get the longitude, latitude and time from the location object
Write the longitude, latitude, ip address, mac address and time on the socket

Location manager request single update(provider to use, location listner)

Write to socket

Instantiate output stream
Set out put stream to the socket's output stream
Write the passed string parameter onto the os stream
Close socket

Config

Inflate the config fragment where user can enter the server's IP address, Port number, frequency of location updates and minimum distance change for a location update

Start Service

- Calls On Create of our Service class
- Starts the thread which this service will run on
- Calls on start command of service class
- Request connection
- Instantiate shared preferences object
- Get the device IP and MAC address
- Start location discovery
- Returns Start sticky so that the service will continue running even when the application is closed.

Start Location Discovery

- Instantiate the location manager object

- If network provider enabled use network provider
- If GPS provider enabled but network provider is not enabled, use GPS provider
- Else use the Passive provider

- This will continuously listen for location updates from the location manager
- Instantiate a Location listener
    - Implement the onLocationChanged callback
        - Get the longitude, latitude and time from the location object
        - Write the longitude, latitude, ip address, mac address and time on the socket

- Request Location Updates(provider, min time, min distance, location listener) - Continuously get location updates

Stop Service

- Calls on Destroy of service class
- Stop the service thread
- Close the client socket