

# Android - Handler

- Long running operations may not be performed on the UI thread, otherwise a ANR (Application Not Responding) Error will be issued.
- Standard Java class `java.lang.Thread` can be used under Android to perform long running operations.
- To simplify synchronization, class `android.os.Handler` can be used.
- Class `Handler` is used to deliver queued message one after another via the callback `handleMessage()`.
- A `Handler` is associated with a thread. If created in the context of the UI thread, the `Handler` can be used to safely update the UI.
- The actual dispatching happens by an instance of class `Looper`. Android will create a `Looper` instance for the UI thread automatically.
- A different thread can also have its own `Looper` instance. Class `android.os.HandlerThread` is a helper class that automatically creates a `Looper` for a new thread.



Entering "12" and then pushing the button "Compute" will show the result (144) after a 5 second delay.

# References

- [java.lang.Thread](#)
- [android.os.Handler](#)
- [android.os.Looper](#)
- [android.os.HandlerThread](#)

# Exercise

Class `android.view.View` has a method `post()` that can also be used to post messages to the UI thread. Rewrite the application such that `View.post()` is used instead of class `UIHandler`