### Using Coroutines in UI Applications



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# The Problem with UIs



## All UIs require that controls are accessed on main thread

- Does not require synchronization

#### What about long running tasks in the UI

- Getting data from the network
- Writing to disk
- Calculations

# Want to perform these away from the main thread

- Better performance
- But have to come back to UI thread to update

Equally as true for Android and JavaFx



```
compile "org.jetbrains.kotlinx:kotlinx-coroutines-
javafx:$kotlin_coroutines_javafx_version"
```

import kotlinx.coroutines.experimental.javafx.JavaFx as UI

Coroutines in JavaFx
Import the correct library



```
compile "org.jetbrains.kotlinx:kotlinx-coroutines-
android:$kotlin_coroutines_javafx_version"
```

import kotlinx.coroutines.experimental.android.UI

Coroutines in Android Import the correct library

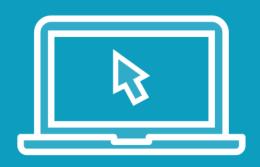


```
launch(UI) { increment() }
suspend fun increment() {
    delay(5000)
    counter.value += 1
}
```

Use the 'launch' coroutine builder In UI context



#### Demo



Using coroutines in the UI



#### Summary



# Kotlin coroutines make it easy to run work in the background

- Use the launch(UI) couroutine builder

