# Background Tasks and Services

## Threading



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| Why | Why NOT |
| * Better CPU utilization * Separation of tasks * Responsiveness | * Complication   Architecture  Load balancing   * Synchronization * Thread pool. . . |

## Android Thread Model

* Don’t do slow things on main thread
* Don’t manipulate Views on worker thread
* Crash

Question: If we cannot access UI Views in worker threads, how can we show on UI that something has finished?

* + Notification between worker threads and main thread

### Handler:



## «AsyncTask»

* Handler + Thread
* Allow the worker thread to report to UI
* AsyncTask<Param, Progress, Result>

• Params: param type to pass to the worker thread

• Progress: type to report progress back

• Result: result type to be delivered



onPreExecute(): for preparation

doInBackground(): do the real work (REQUIRED)

onProgressUpdate(): for updating progress to

UI

onPostExecute(): for delivering result