Types of Frameworks in AsyncTask (Part 2)

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Learning Objectives in this Part of the Module

• Understand what black-box & white-box framework are... & how AsyncTask implements both types of frameworks

• Learn how the AsyncTaskInterrupted program works

See github.com/douglasraigschmidt/POSA/tree/master/ex/M5/GCD/AsyncTaskInterrupted
Runtime Behavior of the AsyncTaskInterrupted App
Runtime Behavior of the AsyncTaskInterrupted App

• Use AsyncTasks & a ThreadPoolExecutor to compute the greatest common divisor (GCD) of two numbers, which is the largest positive integer that divides two integers without a remainder.
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The user can cancel AsyncTask computations at any time.
• Use AsyncTasks & a ThreadPoolExecutor to compute the greatest common divisor (GCD) of two numbers, which is the largest positive integer that divides two integers without a remainder.

The device’s runtime configuration can also change at any time without affecting running computations.
Implementation of the AsyncTask Interrupted App
Implementation of the AsyncTaskInterrupted App

• This app showcases the black-box & white-box frameworks in Android’s AsyncTask class

See github.com/douglasraigscmidt/POSA/tree/master/ex/M5/GCD/AsyncTaskInterrupted
Implementation of the AsyncTaskInterrupted App

- This app showcases the black-box & white-box frameworks in Android’s AsyncTask class

Super class that automatically logs lifecycle hook method invocations to aid debugging
Implementation of the AsyncTaskInterrupted App

- This app showcases the black-box & white-box frameworks in Android’s AsyncTask class

Start & cancels AsyncTasks that repeatedly compute the GCD of two random numbers
Implementation of the AsyncTaskInterrupted App

• This app showcases the black-box & white-box frameworks in Android’s AsyncTask class

Stores state (including the AsyncTasks & ThreadPoolExecutor) that’s passed between instances of the MainActivity after runtime configuration changes
This app showcases the black-box & white-box frameworks in Android’s AsyncTask class.

Extends AsyncTask & in a ThreadPoolExecutor thread repeatedly computing the GCD of two numbers in a manner that can be cancelled at any point.
End of Types of Frameworks in AsyncTask (Part 2)