**Async Program ReadMe File**

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**Assignment**:

Maintenance a program that implements a progress bar (<https://en.wikipedia.org/wiki/Progress_bar>) with Android Studio and fix the progress bar and make him work.

**Main Goals:**

Use our knowledge in **Java** programming and implement a progress bar with Android Studio java, and fix the progress bar to update by the worker thread (<https://developer.android.com/guide/components/processes-and-threads#WorkerThreads>).

Calculate the biggest prime number (<https://en.wikipedia.org/wiki/Prime_number>) that smaller than 10000 on the worker thread.

Implements the MVC model (<https://en.wikipedia.org/wiki/Model-view-controller>) as much as possible.

Write a ReadMe file that explains how the program works.

**Package:**

Async - Hagay&Elihai

**Classes:**

MainActivity.java

activity\_main.xml

**Classes Explanation:**

We received in advance an unperfect program. The important things that we changed to make this program work are:

Added an "EXIT" button.

Merged the private class "WorkerTask" in our "MainActivity" class.

Edited the "WorkerTask" methods to work.

doInBackground() - Calculate the biggest prime number that smaller than 10000.

After every 100 numbers the program calculate, it's going to sleep for 70ms (otherwise the program was finishing to fast, and you could not see the progress bar update).

onProgressUpdate() – Updates the progress bar during the calculations of the prime numbers.

onPreExecute() – Reset the progress bar and update the "startMessage", "resetMessage" and the "exitMessage" (TextView).

In addition, to improve app design we add a photo of Shenron (<https://dragonball.fandom.com/wiki/Shenron>) the Japanese dragon of Dragon Ball Z <https://en.wikipedia.org/wiki/Dragon_Ball_Z>).)

MVC:

Model – strings.xml. Also, there are variables on "MainActivity" that belong to the model.

View – .xml files.

Controller – .java files.

**Running the program:**

To run the program, from within the \*.java files location, type the following orders:

Enter to Android Studio and import this file "Async - Hagay&Elihai". After that you can push the play button and select your emulator and wait. Now press the "START" button and enjoy. To reset the progress bar, press the "RESET" button.

To exit the program: within the GUI, just press the 'X' with your mouse, or press the "EXIT" button.

All the process of running the program have been done only on "[Genymotion](https://www.genymotion.com/)" emulator, and in the mail is attached video that shows how the program runs in the "[Genymotion](https://www.genymotion.com/)" emulator (<https://www.genymotion.com>).