

## ARKABLOCK (Arkanoid Clone)

*ArkaBlock* source code is a tiny modified version of my original game [Arkamania](https://play.google.com/store/apps/details?id=es.jdbc.arkamania) available for Android and iOS:

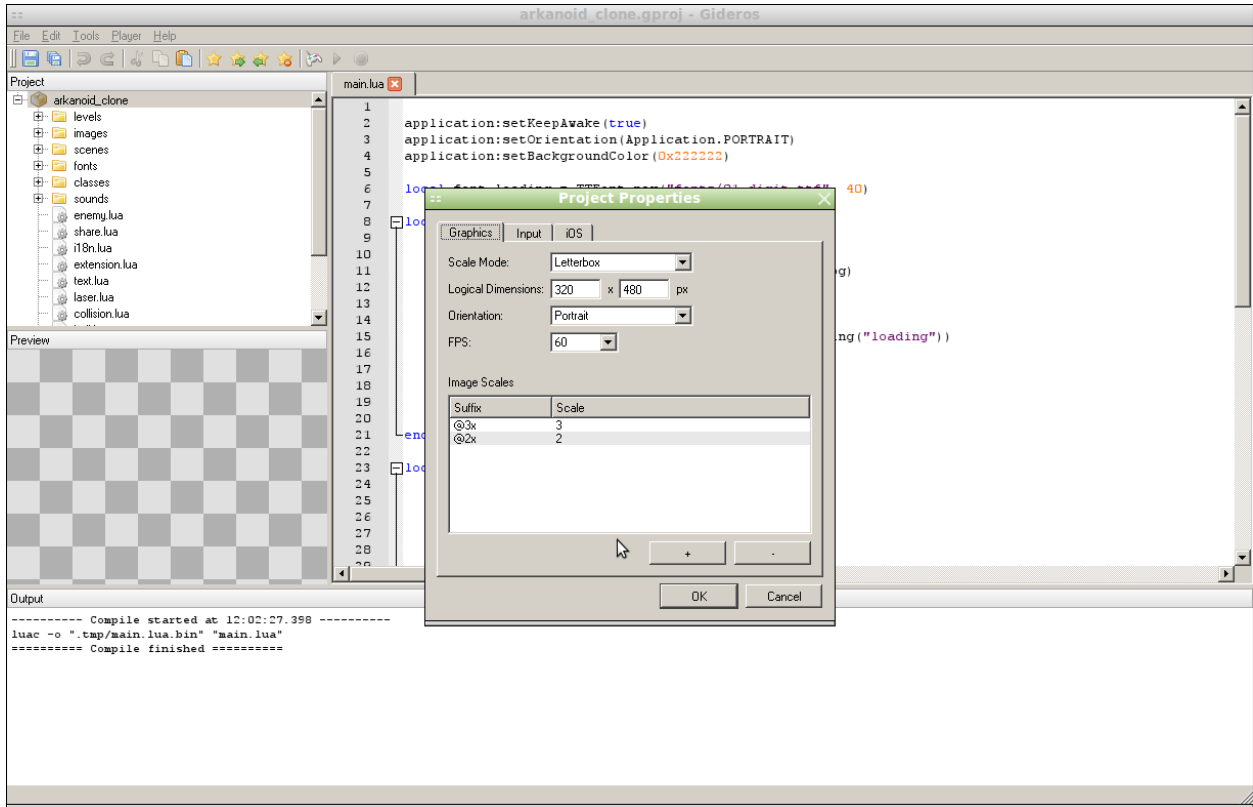
<https://play.google.com/store/apps/details?id=es.jdbc.arkamania>

<https://itunes.apple.com/us/app/arkamania-brick-breaker-game/id647916225?mt=8>

# 1) Setup project

This game has been developed with *Lua* programming language and *Gideros Mobile*, a free and open source cross-platform framework. The source code provided works on Android / iOS mobile and tablet devices.

- Download **Gideros 2014.01** from <http://giderosmobile.com/download> and install it on your desktop environment (Mac, Windows or Linux + Wine). Gideros includes three main tools to develop cross-platform games: Gideros Studio, Gideros Player and Gideros Texture Packer.
- Go to *TNT\_CollisionEngine/Libs* folder and depending on your development platform (Windows, OSX) copy *Windows/tntNativeCollision.dll* file or *OSX/libtntcollision.dylib* file into your *[Gideros\_installation\_folder]/Plugins* folder.
- Download **Eclipse ADT** from <http://developer.android.com/sdk/index.html> and install it. The Eclipse ADT bundle includes everything you need to develop on Android:
  - Eclipse + ADT plugin
  - Android SDK Tools
  - Android Platform-tool
- Extract *ArkaBlock.zip* file into your projects folder.
- Launch Gideros Studio.
- *File -> Open Project:* go to *ArkaBlock/gideros\_lua* folder and select *arkanoid\_clone.gproj* file in order to open the Gideros game.



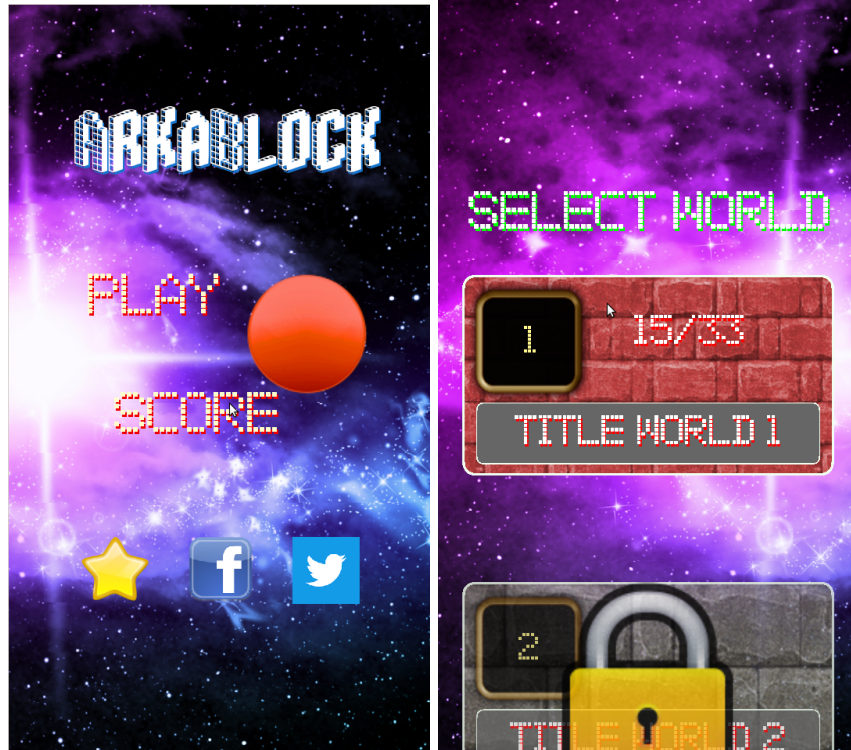
- *Player -> Start Local Player:* it will start Gideros Player.

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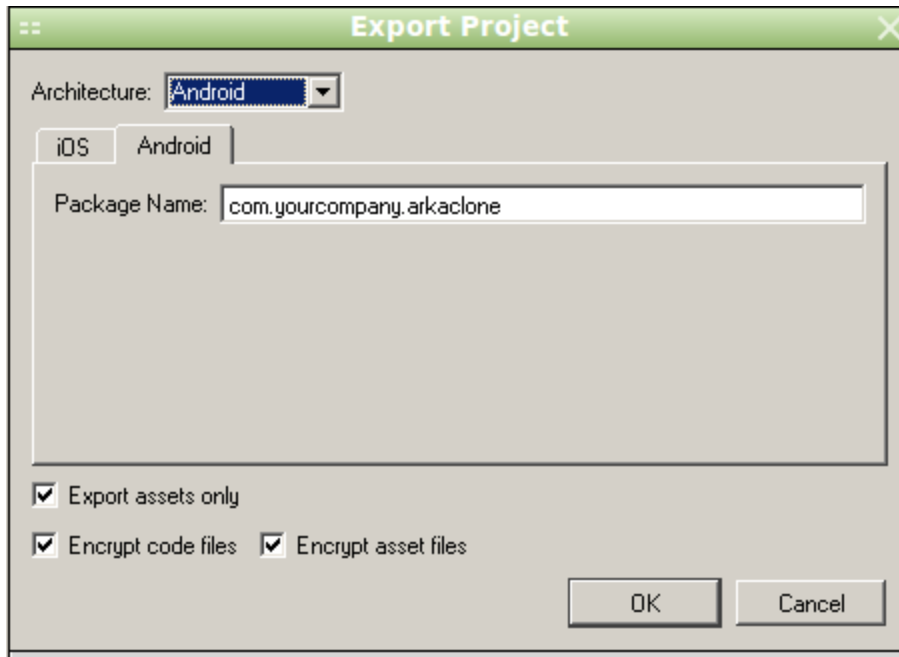
2014.01
LOCAL IP INFO:
192.168.1.13
192.168.122.1

```

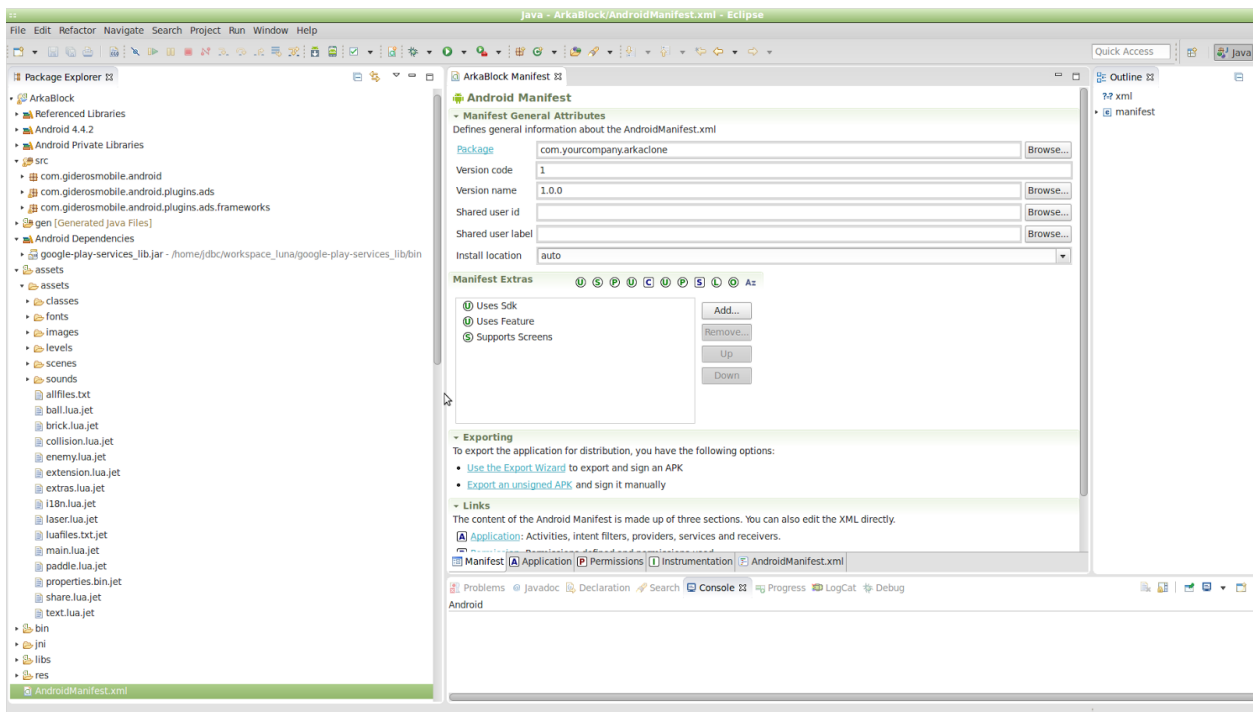
- *Player -> Start:* to run and test this game on Gideros Player.



- At this moment you have to replace resources in order to reskin. Read point 2 and 3 for more information.
- *File -> Export Project*: it will export the Gideros project to Android project. Type your package name, check to export assets only, encrypt code files and encrypt asset files.



- Click *OK* and choose *ArkaBlock/android\_project* folder as your target folder. A new *assets* folder will be created within *ArkaBlock/android\_project* folder.
- Import the exported Android project into your Eclipse workspace as Android project. Read point 7 for more information.



- You need to add Google Play Services library to this Android Eclipse project in order to show Admob advertise banners and interstitials. Read Google official

documentation for further info:

<https://developer.android.com/google/play-services/index.html>

- Edit the *AndroidManifest.xml* file to change the package name.
- Edit *res/values/strings.xml* file to change *app\_name* value with your app name.

## 2) Lua source code structure

- The folder *scene* includes *.lua* files defining the scene classes. There are the following scenes: *menu*, *game*, *choose*, *world* and *highscore*.
- Every scene class defines a static *setup()* method that preloads images and sounds in memory. The *setup()* method is called from starting *main.lua* file but you can change where is called for memory issues if you prefer.
- The *main.lua* file will load images and sounds in memory by calling to *setup()* method of each lua scene class. When game starts, the *menu* scene is initialized.
- The folder *classes* includes some common and helper classes needed (collision, UI design ...)
- The *i18n.lua* file is the languages file. English, french, spanish, portuguese, italian, german, korean, japanese, chinese and russian languages are supported.

## 3) Resources to reskin

Resources files are graphics, sounds and fonts:

The *gideros\_lua/fonts* folder includes font files used in the game for english, french, spanish, portuguese, german and italian languages. Replace *.tff* files to replace the fonts of your new game. You can download free TTF files from <http://www.1001freefonts.com>

The *DroidSansFallback.ttf* file is used for Russian, Chinese, Korean and Japanese languages, it means you do not need to replace this file.

The *gideros\_lua/sounds* folder contains music and sound effects in WAV or MP3 format. Replace them to use your own music and effects, better MP3 for music and WAV for sound effects.

The *gideros\_lua/images* folder includes graphics used in the game. These graphics are free but you should to replace all of them for publishing your new game.

Use **Gideros TexturePacker** program to export and replace new brick images (*brick.png* and *brick.txt* files)

Replace the following images within *gideros\_lua/images/game* folder:

- Two ball images: *ball\_red.png* and *ball\_white.png* files.
- Two paddle images: *paddle.png* and *paddle\_green.png* files.
- Powerups images: *pill\_xxxx.png* files.
- The enemy image: *enemy.png* file.
- The particle effect image when paddle and enemy are destroyed: *smoke.png* file.
- The laser image: *laser.png* file.

Replace the following images within *images* folder:

- Background image: *menu\_bg.png* file.
- Up and down arrows: *arrow\_up.png* and *arrow\_down.png* files.
- Play again and home images: *repeat.png* and *home.png* files.
- Facebook and Twitter icons: *facebook-icon.png* and *twitter-icon.png* files.
- Lock item image: *lock\_yellow\_01.png* file.
- Rating star image: *star.png* file.

## 4) Level files

Inside *levels* folder, *world1.lua* and *world2.lua* files provide the level files. There are only 5 sample levels, the rest of level files are empty.

You have to design your own levels editing *world1.lua* and *world2.lua* files: for instance *{10, 76, Brick.GREY}* describes a Grey brick with top-left point at *{10, 76}*

By design brick's width is 25 pixels and brick's height is 14 pixels. Check *brick.lua* file to know all brick types (*Brick.RED*, *Brick.GREY*, ...). *Brick.GOLD* type defines an indestructible brick.

## 5) Advertise integration

The *classes/ads.lua* file contains the source code to integrate advertise banners and interstitials inside the game. Android integrates Admob 6.4.1 SDK.

Use Gideros Studio to open *classes/ads.lua* file and edit the local variable *android\_publisher\_id* to replace "XXXXXXXXXXXXXXXX" with your Admob publisher id.

The static methods *Advertise.showBanner()*, *Advertise.hideBanner()* and *Advertise.showInterstitial()* are called to show banner, hide and show interstitial ads in the game.

## 6) Powerups

If you smash a brick then sometimes a colored pill will fall providing the following powerups:

- Longer paddle
- One extra live
- Paddle with laser
- Slow speed of the ball
- Special ball (no collision effects with bricks)
- 3 or 5 balls at once.

If you know Lua programming, then you could edit *extras.lua* file to create new powerups.

## 7) Android project

The *AndroidProject* folder contains the source code to import as a typical Android project. Use Gideros to open Lua project, export project (only assets are needed) and copy them into this folder.

Open and edit *AndroidManifest.xml* file to change package name (*package="com.yourcompany.arkaclone"*) and change app icon files inside *res* folder