

Game engine: LibGDX

About:

What is it:

It is an OpenGL based Java framework, with

- 1) Eclipse, IntelliJ, Android Studio IDE support.
- 2) Gradle based project generation in terms of dependencies, importing and running.

How is it different from JavaFX:

- 1) Lots of extensions:

[Bullet](#): 3D Collision Detection and Rigid Body Dynamics Library.

[Controller](#) Library to handle controllers (e.g.: Xbox 360 controller).

[Box2d](#): Box2D is a 2D physics library.

[Box2dlights](#): 2D lighting framework that uses box2d for raycasting and OpenGL ES 2.0 for rendering.

[Ai](#): An artificial intelligence framework

- 2) Provides more control over the code(since there is no GUI like scene builder).
- 3) It gives an abstraction layer above all of the important features (touch handling, music, fx, graphics, and so) so you don't need to reinvent the wheel.
- 4) JavaFX & Swing are old tech compared to libGDX.

Games Made: Both 2D and 3D games and export to platforms like iOS, Android, Linux, Mac, and Windows

https://www.youtube.com/watch?v=ESN9RMZcVj0&ab_channel=AskGamedev

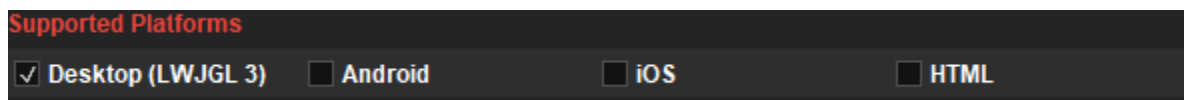
Setup:

Before setting up your game directory, it is essential to have the Java development kit installed on your system. If not, please follow the instructions here:

https://www3.ntu.edu.sg/home/ehchua/programming/howto/jdk_howto.html

LibGDX setup Guide: <https://libgdx.com/wiki/start/project-generation>

Please note that since we would only be building games for desktop, it is important that you check only desktop on the setup tool.



This is necessary because checking other platform requires other dependencies apart from jdk to successfully run and build your game (eg. Android studio SDK).

Running & building:

To build on Desktop, run the following command in the root directory:

```
./gradlew desktop:dist
```

Following the above, run the next command to run the game:




```
./gradlew desktop:run
```

Note: If using an IDE like IntelliJ you can use the user interface in the IDE to build and run directly as well.


Hello World Guide: <https://gamefromscratch.com/libgdx-tutorial-series/>

Raindrop game reference: <https://libgdx.com/wiki/start/a-simple-game>

Tutorial Series:

1.  LibGDX 2D Tutorial #1: Setting up Eclipse, Gradle and Android SDK
2.  LibGDX Platformer Tutorial #1: Intro!
3.  Configuring a Java development environment for LibGDX and Android develop...

Make demo game: Super Mario Bros

-  1 - LibGDX Game Development with Android Studio - Creating Super Mario Bros - Setup

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