

Chapter 1: Introduction to LibGDX and Project Setup

The screenshot shows a web browser window displaying the Oracle Java SE Downloads page. The address bar shows the URL `www.oracle.com/technetwork/java/javase/downloads/index.html`. The page title is "Java SE - Downloads | Oracle T...". The navigation menu includes "Overview", "Downloads", "Documentation", "Community", "Technologies", and "Training". The main content area is titled "Java SE Downloads" and features two large download buttons: "Java Platform (JDK) 8u5" and "JDK 8u5 & NetBeans 8.0". Below this, there is a section for "Java Platform, Standard Edition" with a sub-section for "Java SE 8u5". This section includes a list of links: "Installation Instructions", "Release Notes", "Oracle License", "Java SE Products", "Third Party Licenses", "Certified System Configurations", and "Readme Files" (with sub-links for "JDK ReadMe" and "JRE ReadMe"). To the right of the links are three download buttons: "JDK DOWNLOAD", "Server JRE DOWNLOAD", and "JRE DOWNLOAD". A sidebar on the left lists various Java products like "Java SE", "Java EE", "Java ME", etc. A sidebar on the right lists "Java SDKs and Tools" and "Java Resources". At the bottom, there is a "Java magazine" promotion with a "Subscribe Today" button and a "Webcast" link.

Java SE Downloads

Java Platform (JDK) 8u5

JDK 8u5 & NetBeans 8.0

Java Platform, Standard Edition

Java SE 8u5
This release includes important security fixes. Oracle strongly recommends that all Java SE 8 users upgrade to this release.
[Learn more](#)

- Installation Instructions
- Release Notes
- Oracle License
- Java SE Products
- Third Party Licenses
- Certified System Configurations
- Readme Files
 - JDK ReadMe
 - JRE ReadMe

JDK DOWNLOAD

Server JRE DOWNLOAD

JRE DOWNLOAD

Java magazine **NEW!** Get it now for FREE! Subscribe Today

Webcast

Java SE Development Kit 8 - D...

www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html

Google

Java SE Development Kit 8u5

You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.

Thank you for accepting the [Oracle Binary Code License Agreement for Java SE](#); you may now download this software.

Product / File Description	File Size	Download
Linux x86	133.58 MB	jdk-8u5-linux-i586.rpm
Linux x86	152.5 MB	jdk-8u5-linux-i586.tar.gz
Linux x64	133.87 MB	jdk-8u5-linux-x64.rpm
Linux x64	151.64 MB	jdk-8u5-linux-x64.tar.gz
Mac OS X x64	207.79 MB	jdk-8u5-macosx-x64.dmg
Solaris SPARC 64-bit (SVR4 package)	135.68 MB	jdk-8u5-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	95.54 MB	jdk-8u5-solaris-sparcv9.tar.gz
Solaris x64 (SVR4 package)	135.9 MB	jdk-8u5-solaris-x64.tar.Z
Solaris x64	93.19 MB	jdk-8u5-solaris-x64.tar.gz
Windows x86	151.71 MB	jdk-8u5-windows-i586.exe
Windows x64	155.18 MB	jdk-8u5-windows-x64.exe

Java SE Development Kit 8u5 Demos and Samples Downloads



Java SE Development Kit 8u5 Demos and Samples Downloads are released under the [Oracle BSD License](#)

Product / File Description	File Size	Download
Linux x86	52.66 MB	jdk-8u5-linux-i586-demos.rpm
Linux x86	52.65 MB	jdk-8u5-linux-i586-demos.tar.gz
Linux x64	52.72 MB	jdk-8u5-linux-x64-demos.rpm
Linux x64	52.7 MB	jdk-8u5-linux-x64-demos.tar.gz



download.oracle.com/otn-pub/java/jdk/8u5-b13/jdk-8u5-windows-i586.exe

Tutorials

Java.com

Java SE Development Kit 8 Update 5 - Setup

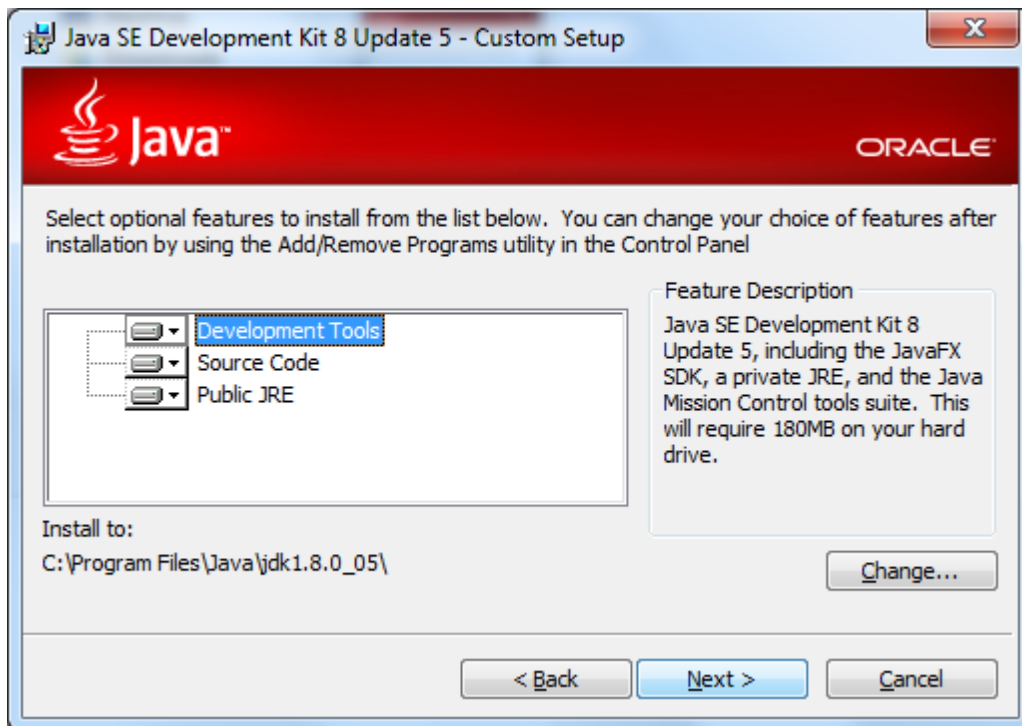



Welcome to the Installation Wizard for Java SE Development Kit 8

This wizard will guide you through the installation process for the Java SE Development Kit 8.

The Java Mission Control profiling and diagnostics tools suite is now available as part of the JDK.

Next > Cancel




Eclipse Downloads

https://www.eclipse.org/downloads/


Allow www.eclipse.org to run "Adobe Flash"? Continue Blocking Allow...

Eclipse Kepler (4.3.2) SR2 Packages for Windows


Eclipse Standard 4.3.2, 200 MB
Downloaded 3,816,076 Times [Other Downloads](#)  [Windows 32 Bit](#)
[Windows 64 Bit](#)

The Eclipse Platform, and all the tools needed to develop and debug it: Java and Plug-in Development Tooling, Git and CVS...


Package Solutions Filter Packages

Eclipse IDE for Java EE Developers, 250 MB
Downloaded 2,332,177 Times  [Windows 32 Bit](#)
[Windows 64 Bit](#)

Tools for Java developers creating Java EE and Web applications, including a Java IDE, tools for Java EE, JPA, JSF, Mylyn...

Eclipse IDE for Java Developers, 153 MB
Downloaded 851,413 Times  [Windows 32 Bit](#)
[Windows 64 Bit](#)

The essential tools for any Java developer, including a Java IDE, a CVS client, Git client, XML Editor, Mylyn, Maven integration...

Eclipse IDE for C/C++ Developers, 143 MB
Downloaded 565,757 Times  [Windows 32 Bit](#)
[Windows 64 Bit](#)

An IDE for C/C++ developers with Mvln integration.

<https://www.eclipse.org/downloads/download.php?file=/technology.../downloads/release/kepler/SR2/eclipse-java-kepler-SR2-win32.zip>

File Edit View History Bookmarks Tools Help

libgdx Index of /releases/ x +

libgdx.badlogicgames.com/releases/ Google

Index of /releases/

../		
gdx-0.1.zip	13-Apr-2014 09:47	2297139
gdx-0.11.zip	13-Apr-2014 09:47	2413524
gdx-0.12.zip	13-Apr-2014 09:47	2603587
gdx-0.2.zip	13-Apr-2014 09:47	2904046
gdx-0.21.zip	13-Apr-2014 09:47	3718665
gdx-0.22.zip	13-Apr-2014 09:47	3969682
gdx-0.3.zip	13-Apr-2014 09:47	3748647
gdx-0.4.zip	13-Apr-2014 09:47	4941801
gdx-0.41.zip	13-Apr-2014 09:47	4947276
gdx-0.5.zip	13-Apr-2014 09:47	5223141
gdx-0.51.zip	13-Apr-2014 09:47	5409638
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gdx-0.6.zip	13-Apr-2014 09:47	5496412
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libgdx-0.81.zip	13-Apr-2014 09:47	8592729
libgdx-0.9.1.zip	13-Apr-2014 09:47	12642583
libgdx-0.9.3.zip	13-Apr-2014 09:47	25740731
libgdx-0.9.4.zip	13-Apr-2014 09:47	25950880
libgdx-0.9.6.zip	13-Apr-2014 09:47	26208032
libgdx-0.9.7.zip	13-Apr-2014 09:47	29766326
libgdx-0.9.8.zip	13-Apr-2014 09:47	44920331
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libgdx-0.9.zip	13-Apr-2014 09:47	11865619
libgdx-1.0.0.zip	20-Apr-2014 16:54	39719151
libgdx-1.0.1.zip	10-May-2014 09:49	39814337
libgdx-1.1.0.zip	23-May-2014 22:03	40915128
libgdx-1.2.0.zip	22-Jun-2014 15:45	41343316

File Edit View History Bookmarks Tools Help

Android SDK | Android Dev... x +

developer.android.com/sdk/index.html

Develop > Tools > Android SDK

Download

Installing the SDK

Adding SDK Packages

Android Studio

Workflow

Support Library

Tools Help


Revisions

NDK

ADK

components and a version of the Eclipse IDE with built-in **ADT (Android Developer Tools)** to streamline your Android app development.

Download Eclipse ADT with the Android SDK for Windows



With a single download, the Eclipse ADT bundle includes everything you need to begin developing apps:

- Eclipse + ADT plugin
- Android SDK Tools
- Android Platform-tools
- A version of the Android platform
- A version of the Android system image for the emulator

If you prefer to use an existing version of Eclipse or another IDE, you can instead download the stand-alone Android SDK Tools:

GET THE SDK FOR AN EXISTING IDE

If you already have an IDE you want to use for Android app development, setting up a new SDK requires that you download the SDK Tools, then select additional Android SDK packages to install (such as the Android platform and system image). If you'll be using an existing version of Eclipse, then you can add the ADT plugin to it.

Download the stand-alone Android SDK Tools for Windows

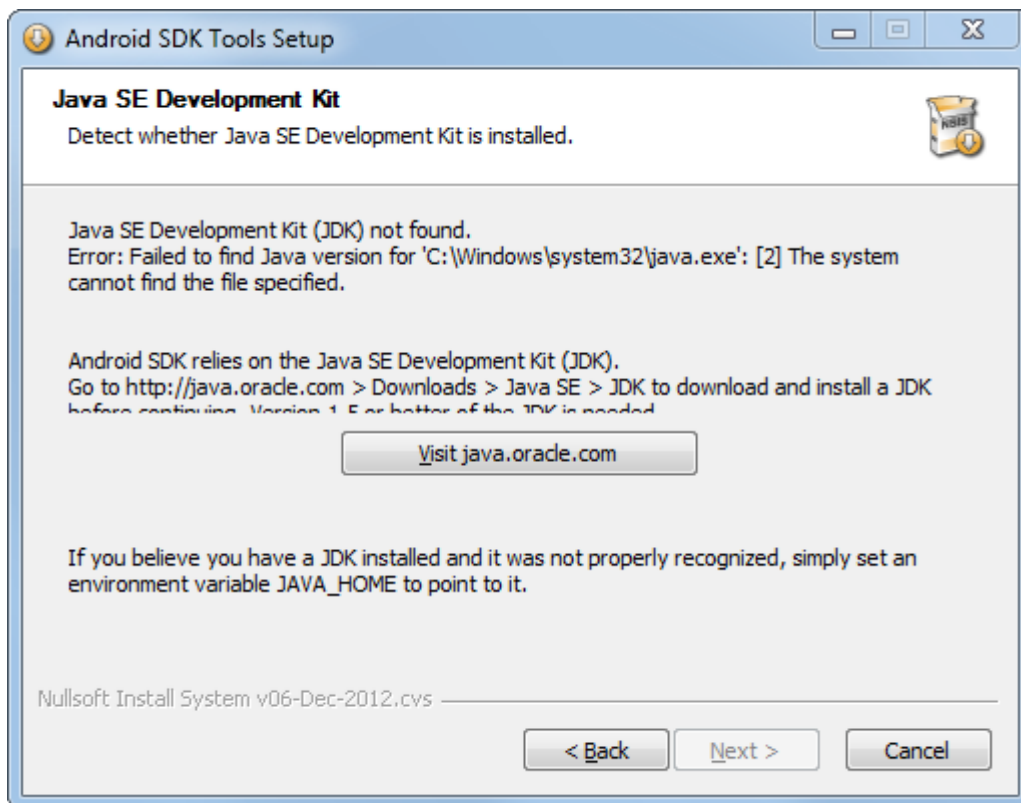
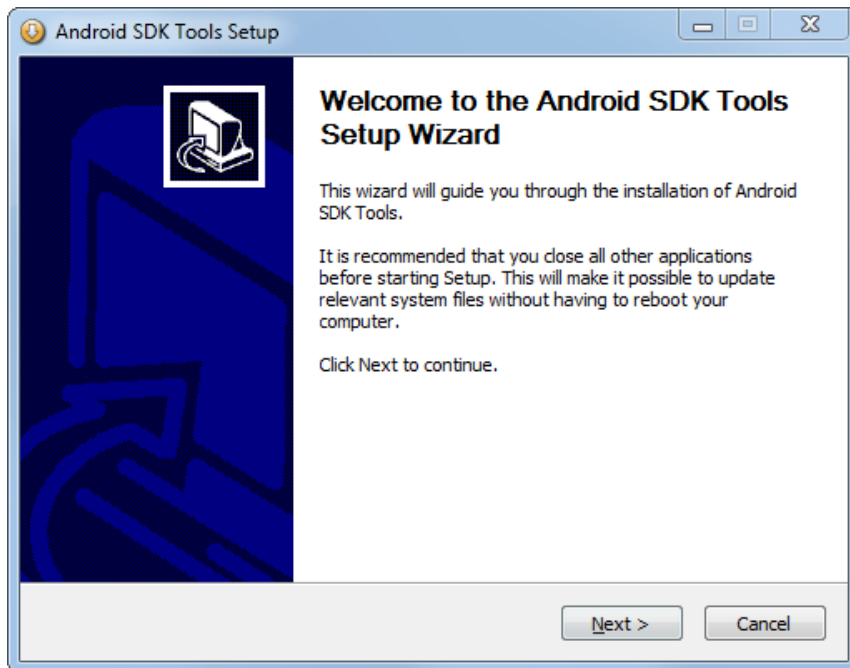
Get Android Studio Beta

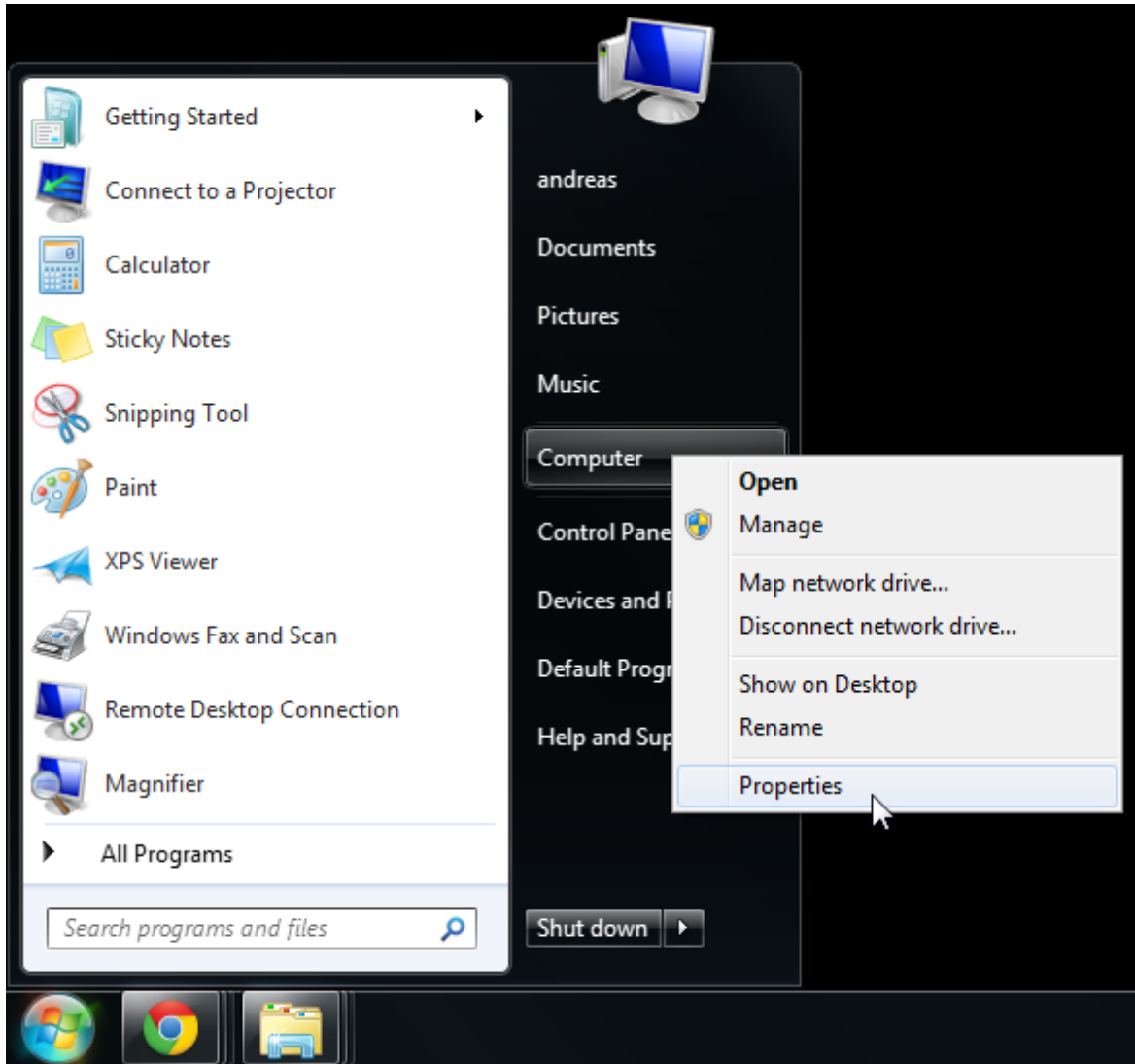
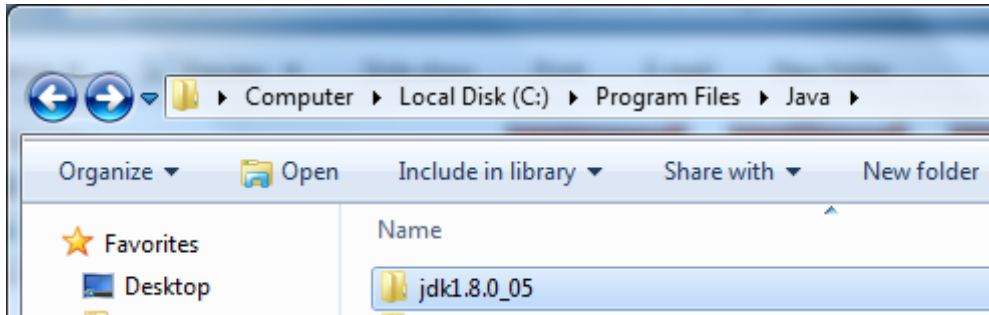
Android Studio is a new IDE powered by IntelliJ that provides new features and improvements over ADT. It's currently in beta but will be the official Android IDE once it's ready.

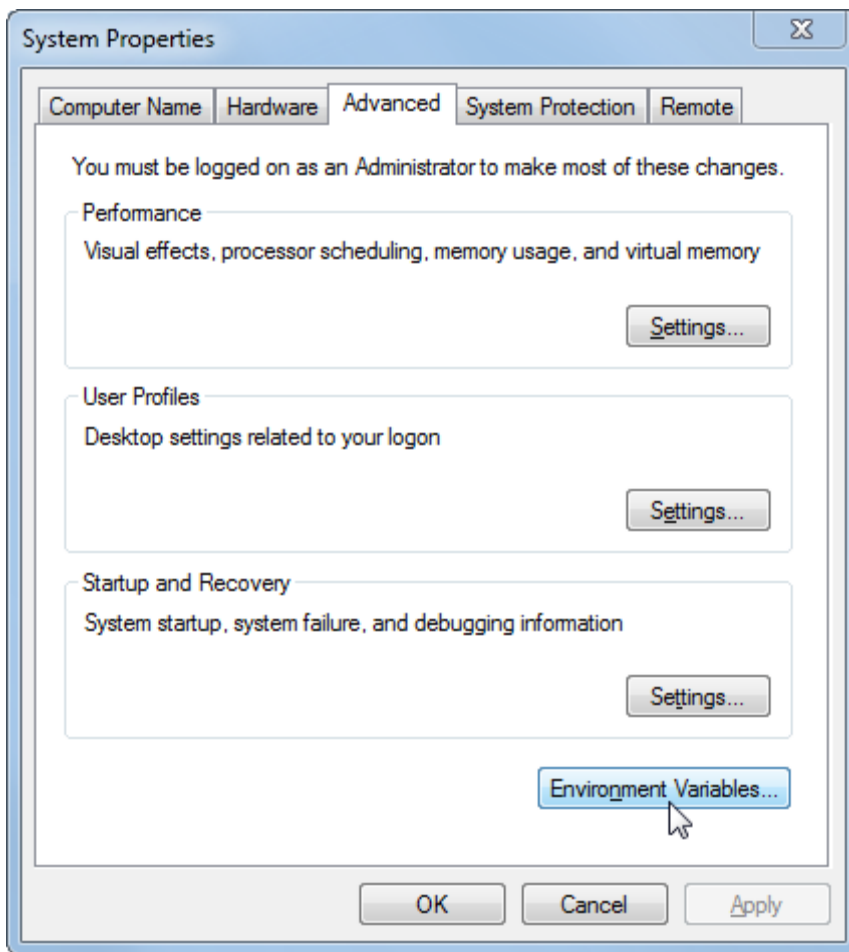
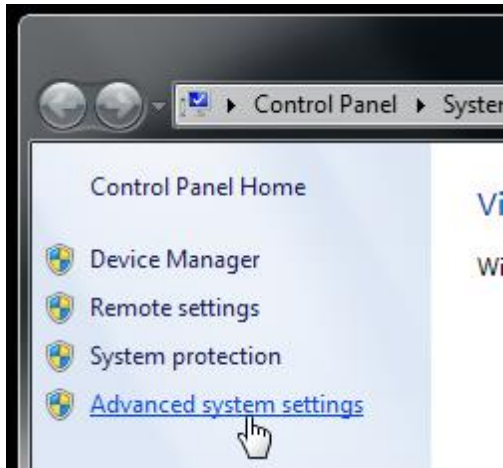
If you're a new Android developer, you should consider starting with Android Studio, because the ADT plugin for Eclipse is no longer in active development.

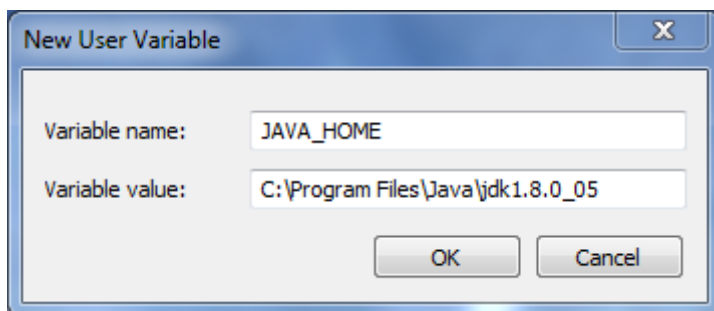
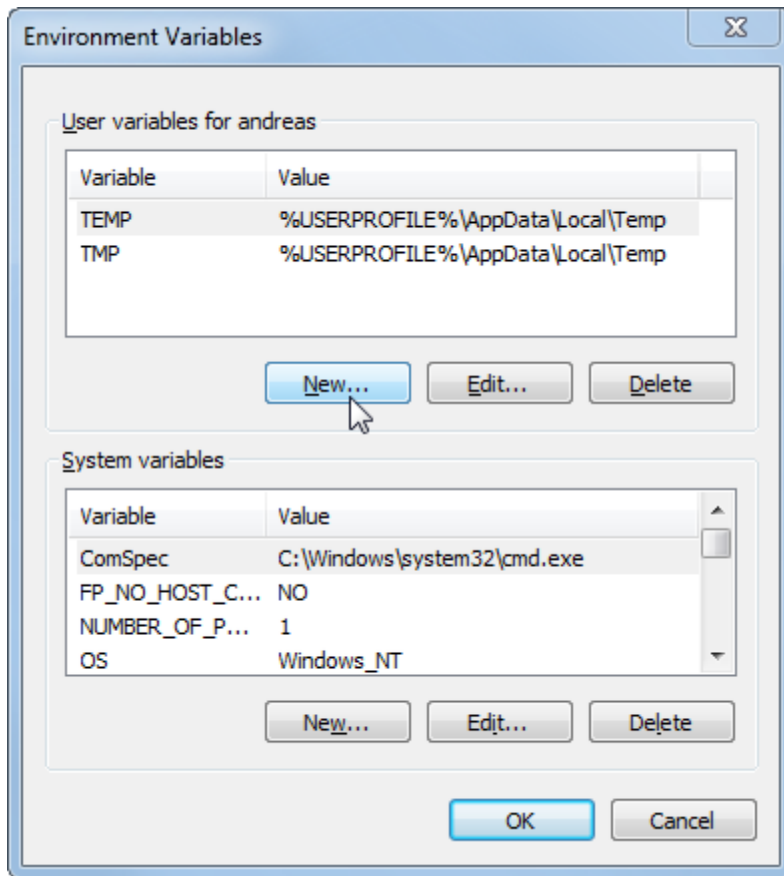
[Learn more about Android Studio](#)

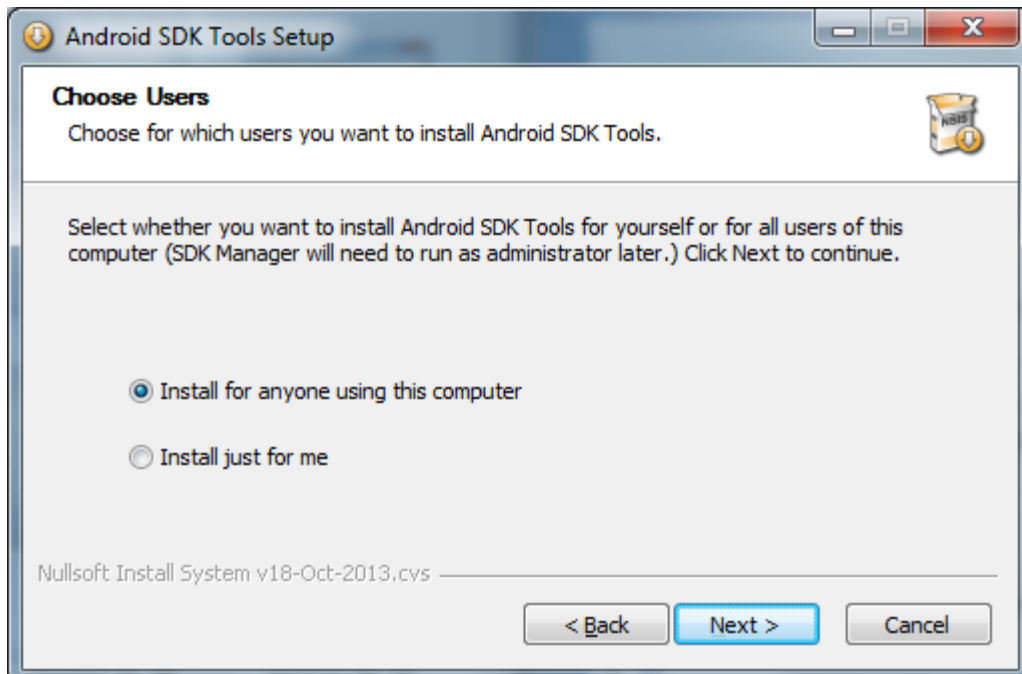
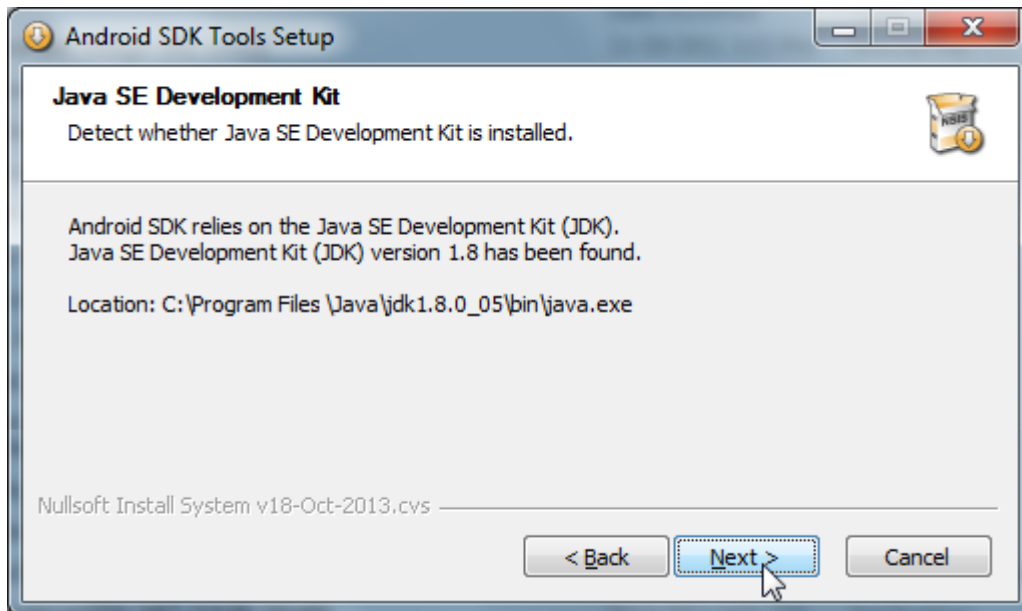
dl.google.com/android/installer_r23.0.2-windows.exe

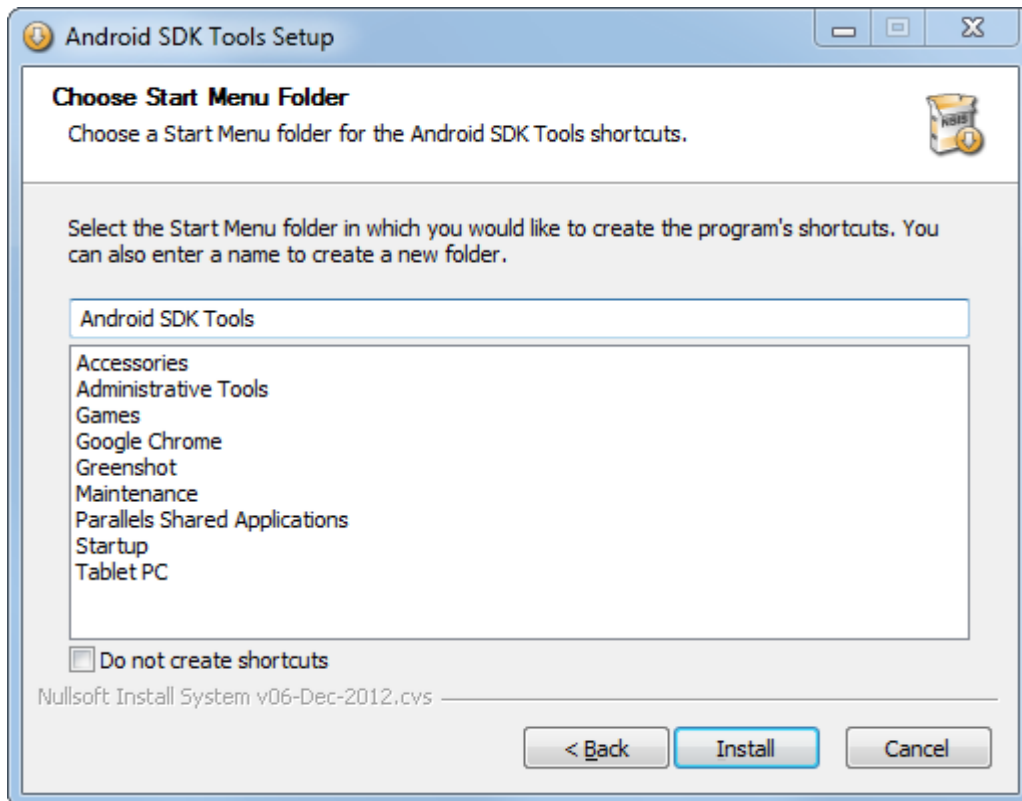
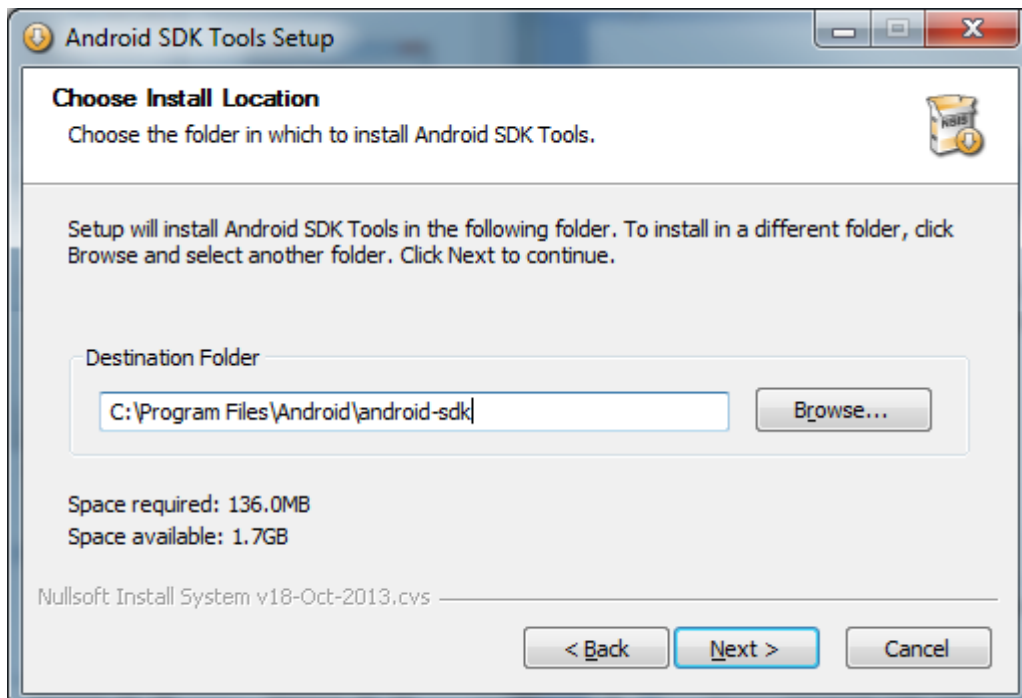


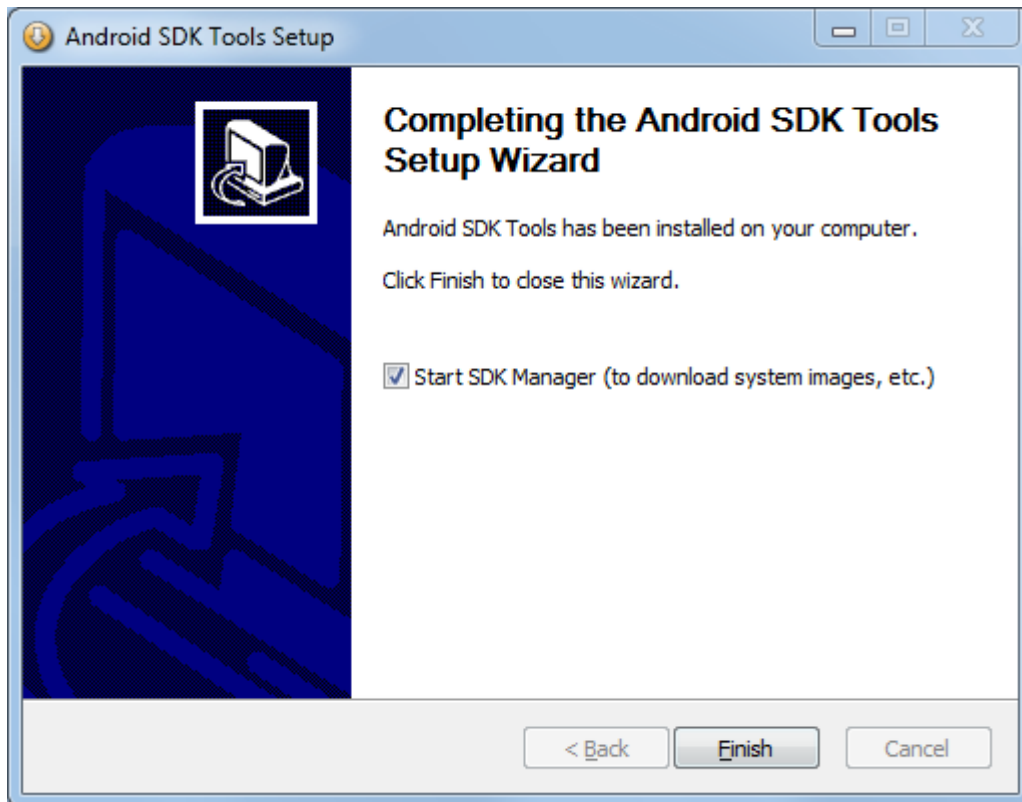
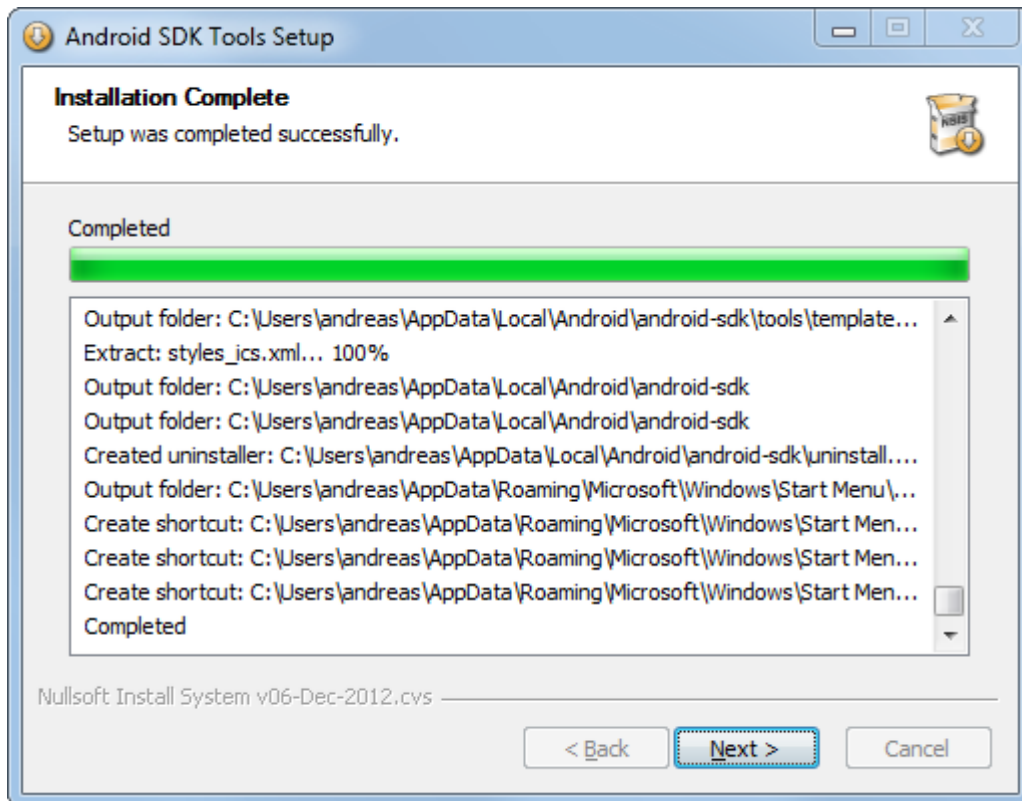


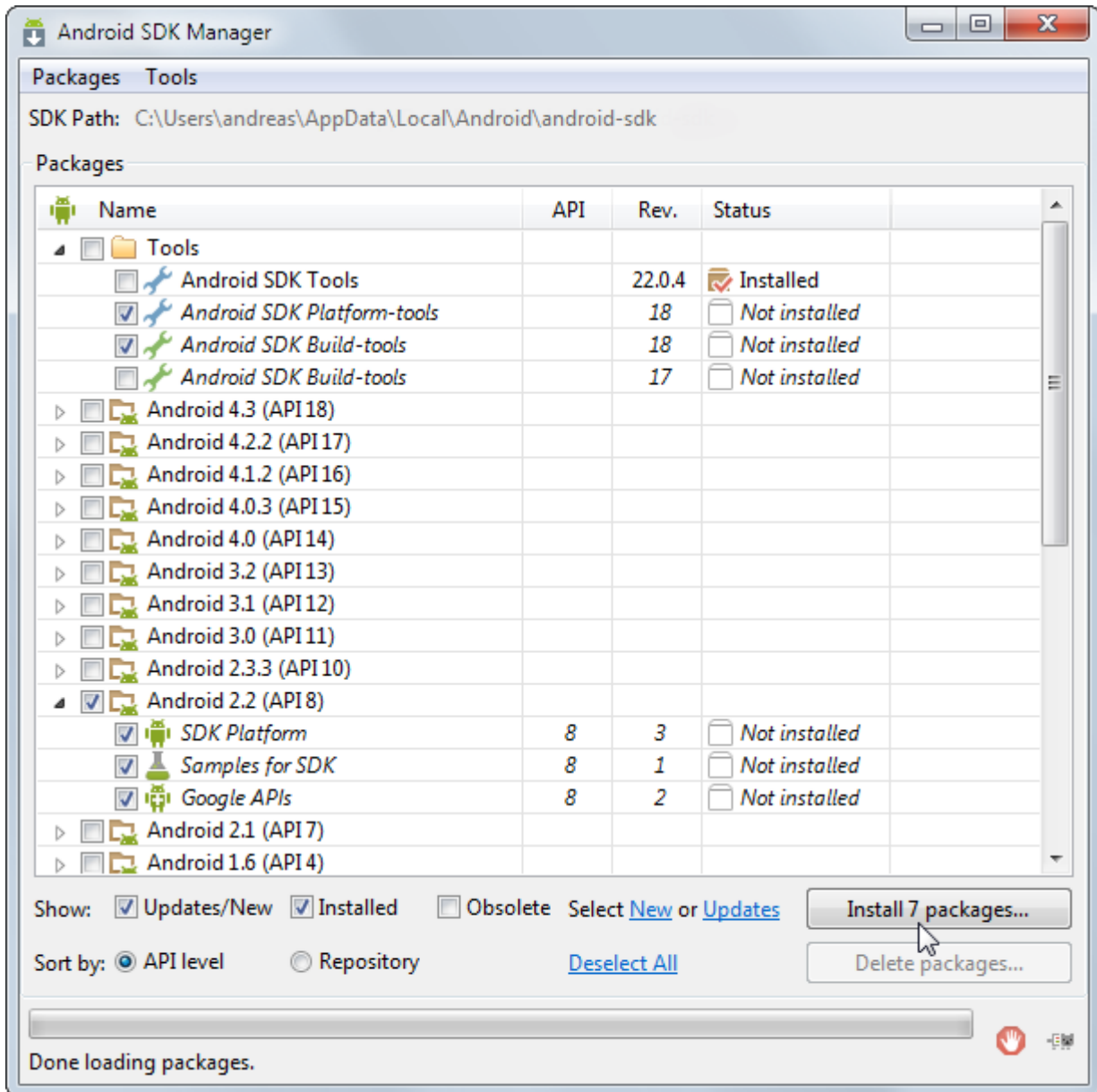


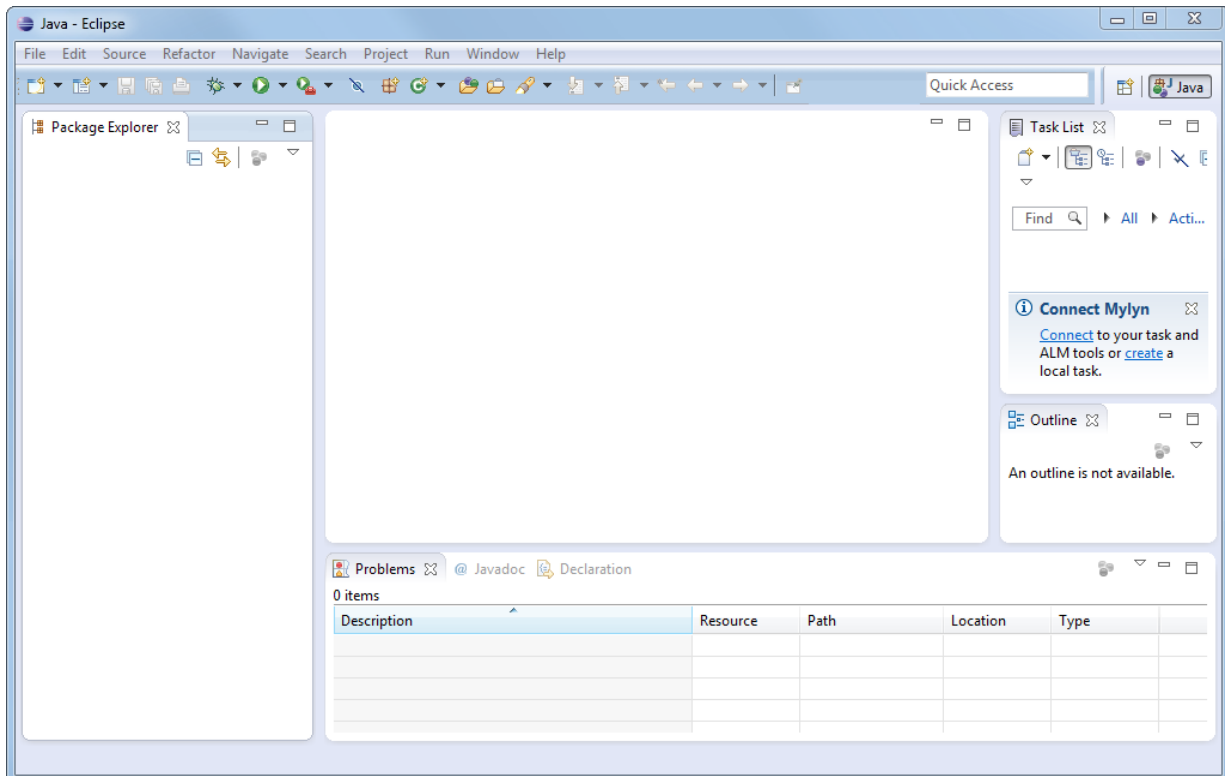
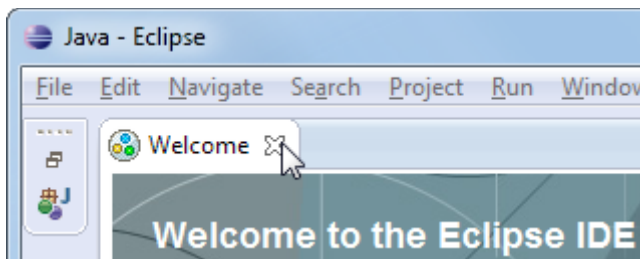
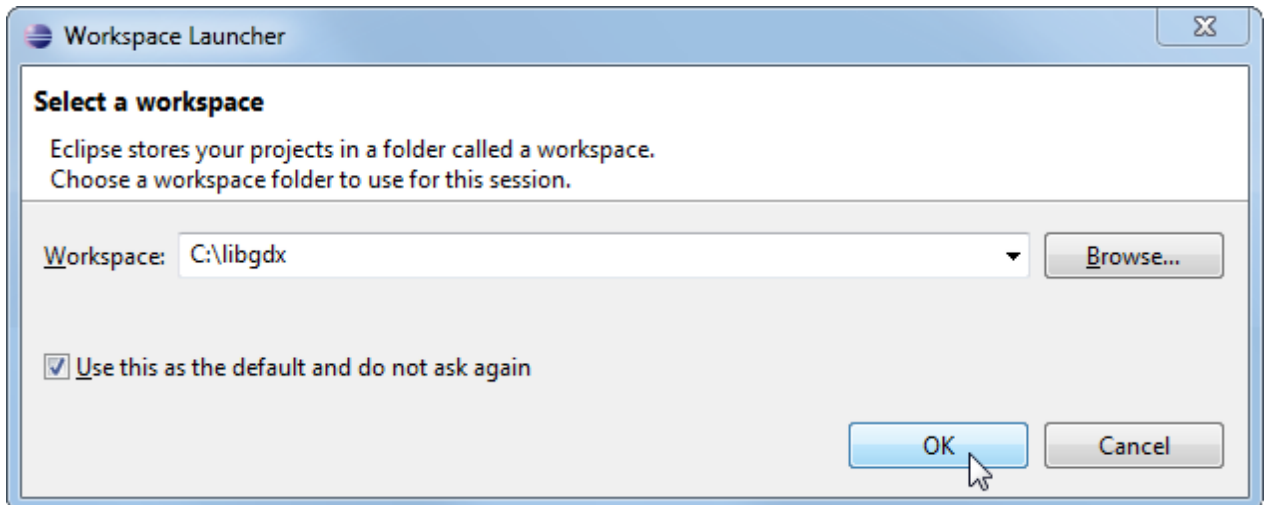












Install

Available Software

Check the items that you wish to install.

Work with:

Find more software by working with the ["Available Software Sites"](#) preferences.

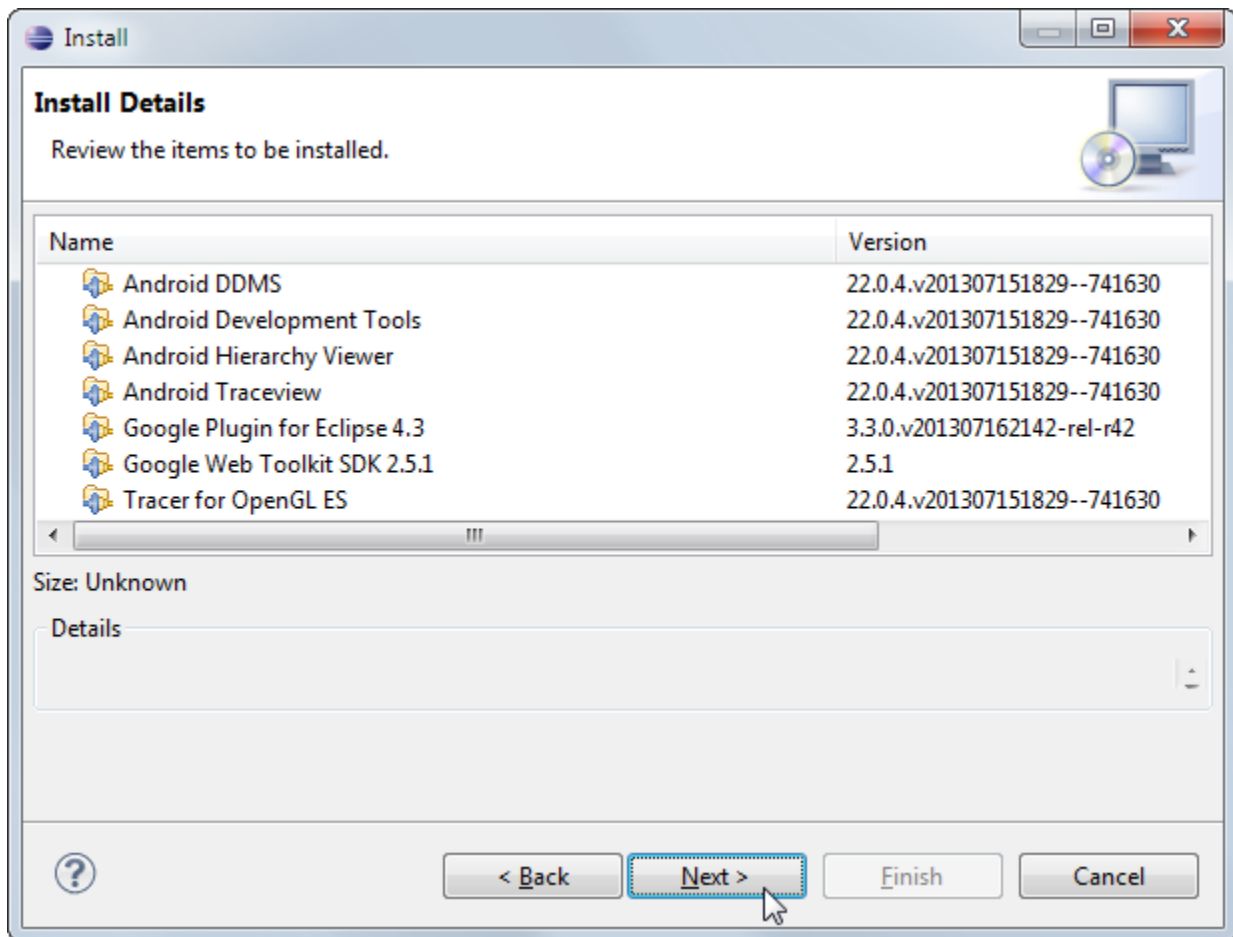
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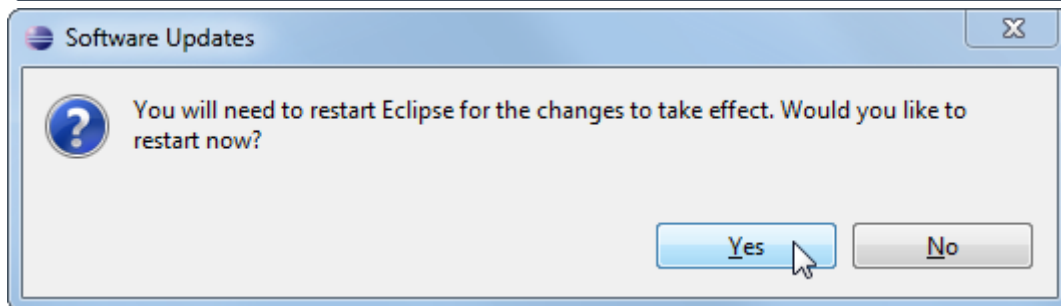
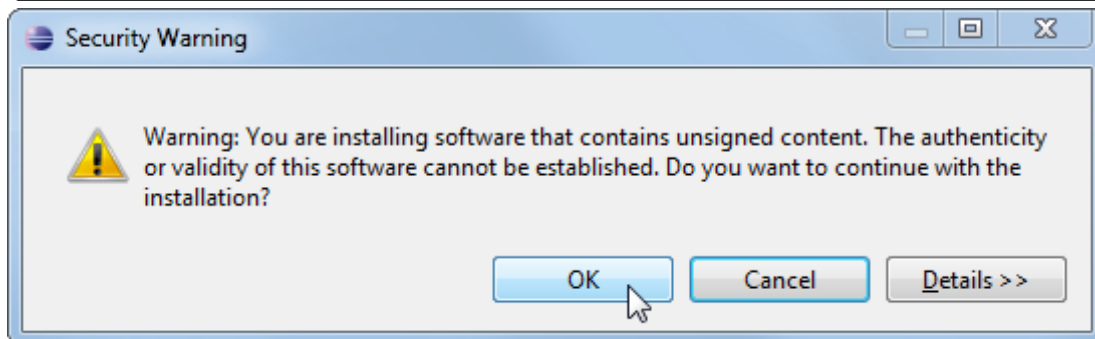
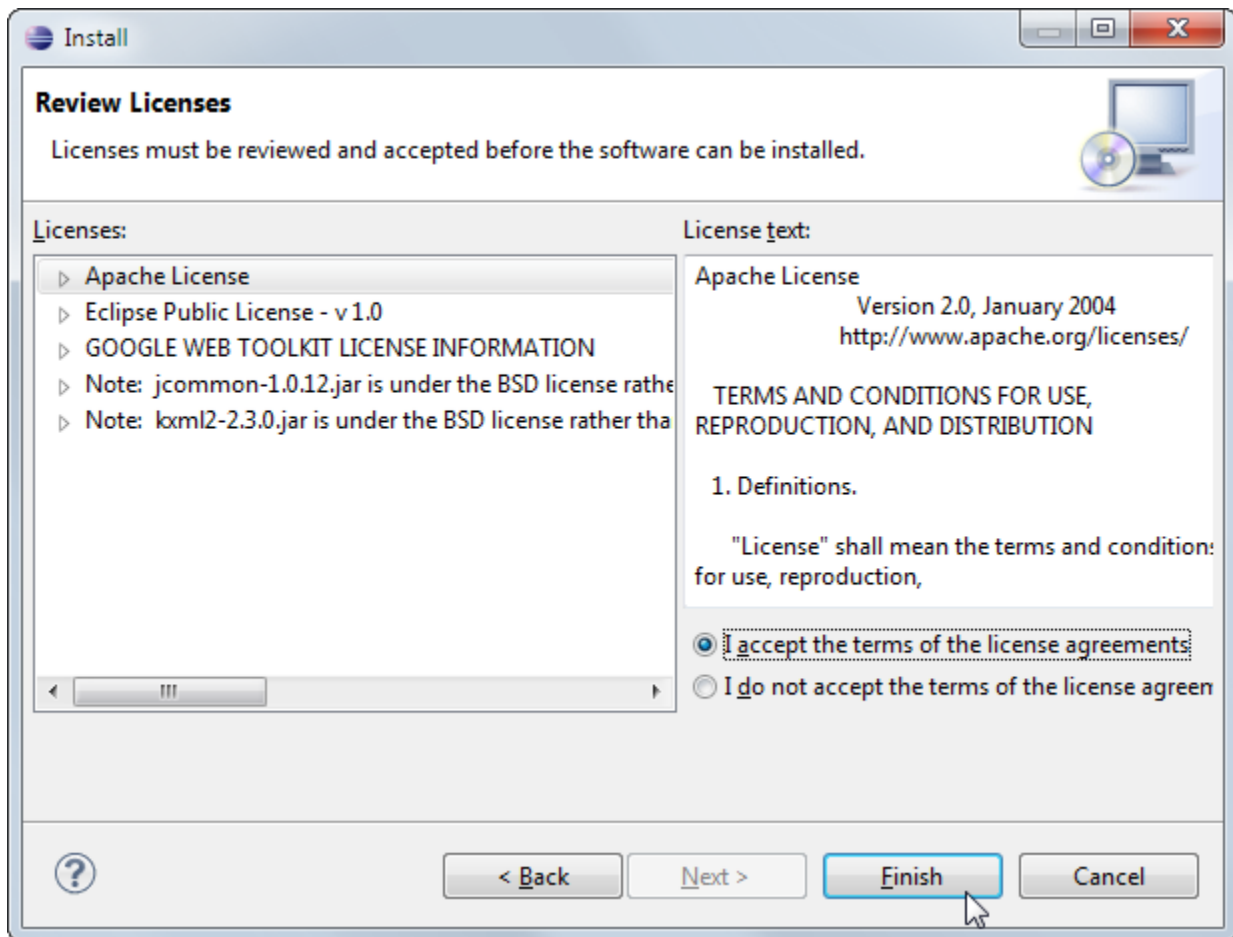
Name	Version
<input checked="" type="checkbox"/> Developer Tools	
<input checked="" type="checkbox"/> Android DDMS	22.0.4.v201307151829--741630
<input checked="" type="checkbox"/> Android Development Tools	22.0.4.v201307151829--741630
<input checked="" type="checkbox"/> Android Hierarchy Viewer	22.0.4.v201307151829--741630
<input checked="" type="checkbox"/> Android Traceview	22.0.4.v201307151829--741630
<input checked="" type="checkbox"/> Tracer for OpenGL ES	22.0.4.v201307151829--741630
<input type="checkbox"/> Google App Engine Tools for Android (requires ADT)	
<input checked="" type="checkbox"/> Google Plugin for Eclipse (required)	
<input checked="" type="checkbox"/> Google Plugin for Eclipse 4.3	3.3.0.v201307162142-rel-r42
<input type="checkbox"/> GWT Designer for GPE (recommended)	
<input type="checkbox"/> NDK Plugins	
<input checked="" type="checkbox"/> SDKs	
<input type="checkbox"/> Google App Engine Java SDK 1.8.2	1.8.2
<input checked="" type="checkbox"/> Google Web Toolkit SDK 2.5.1	2.5.1

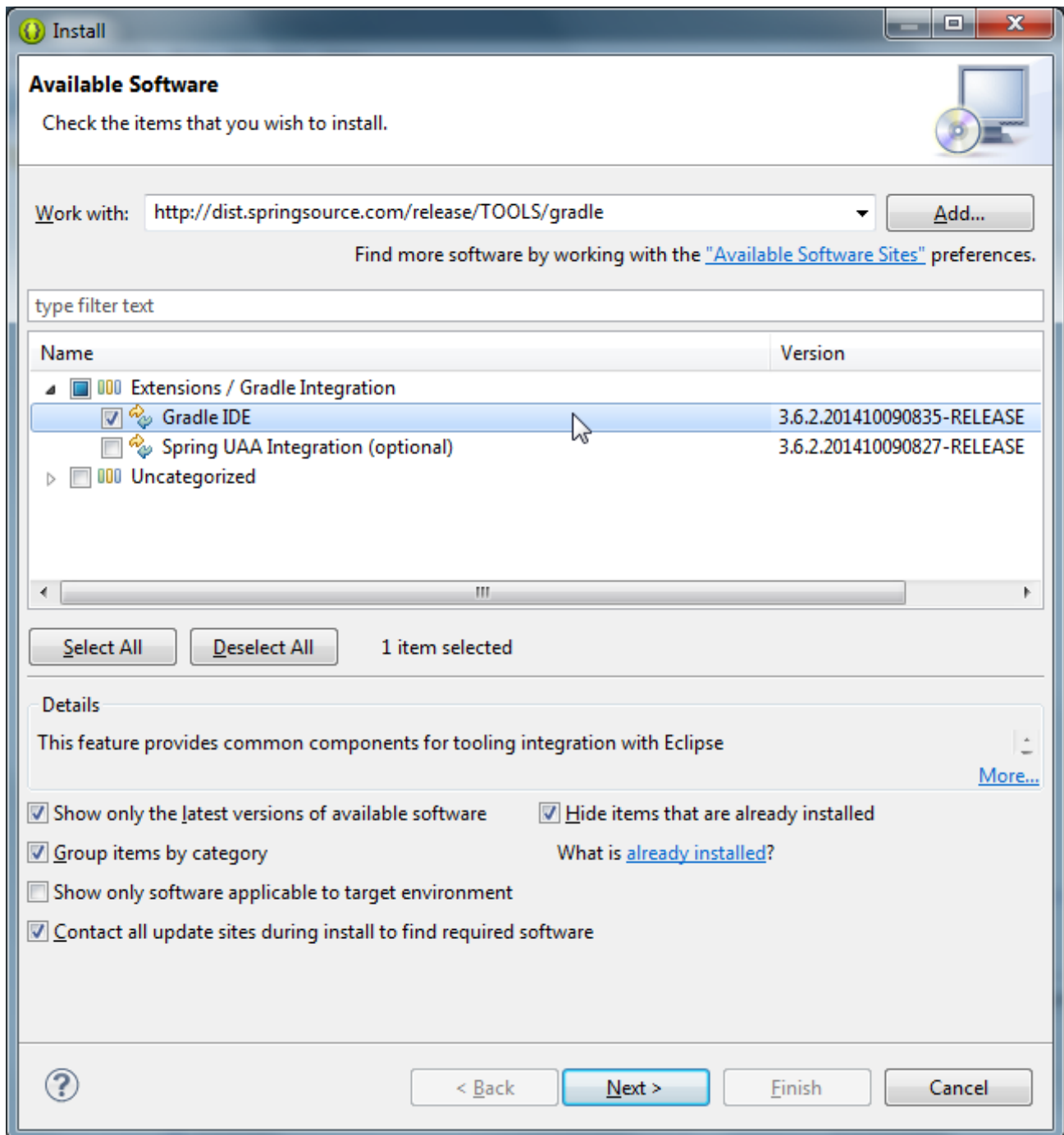
7 items selected

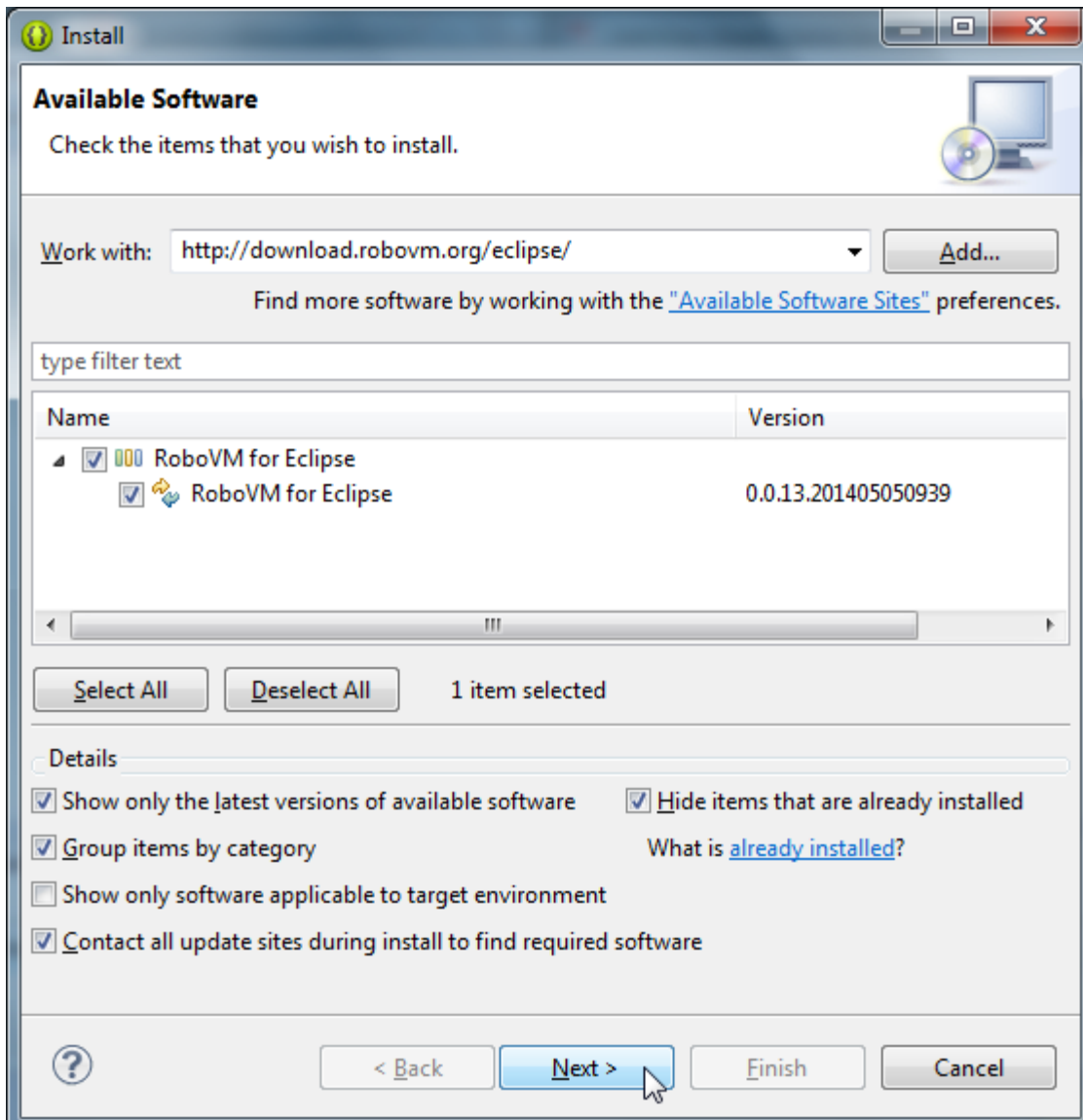
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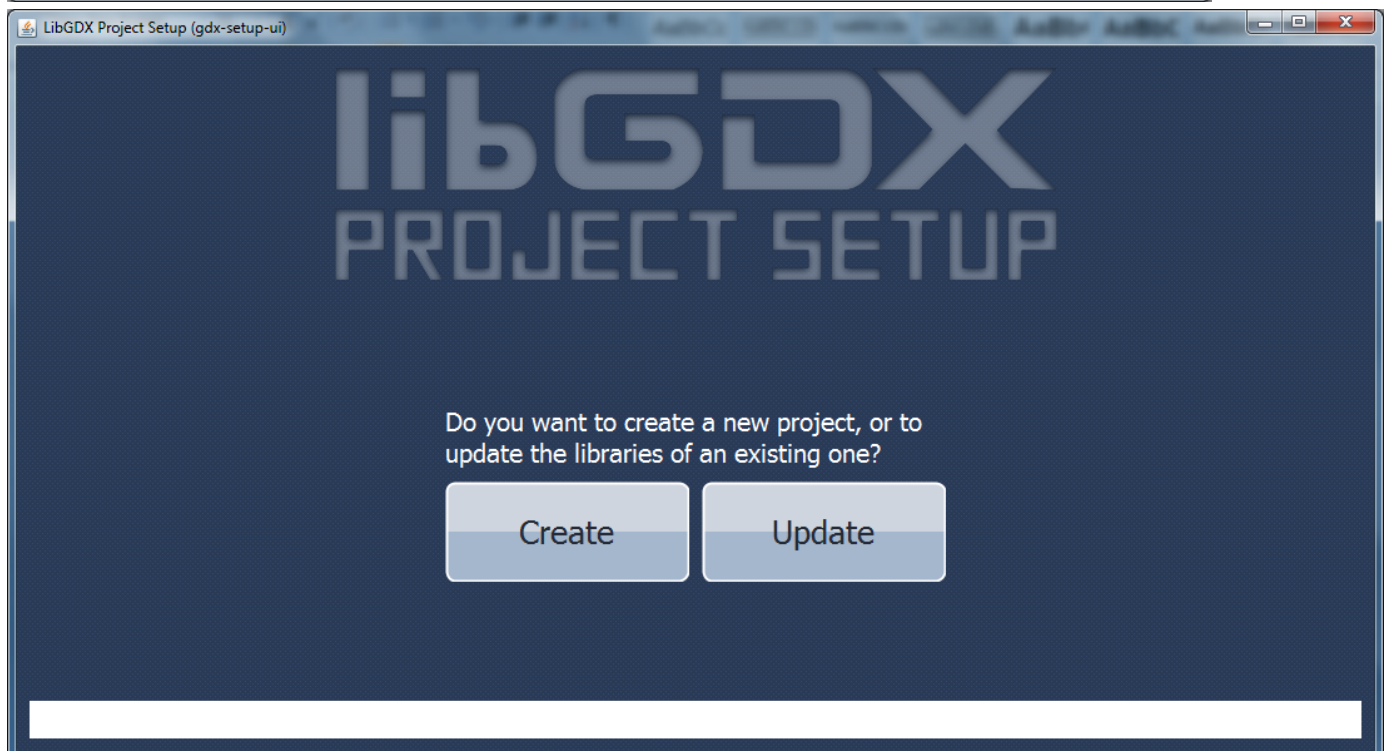
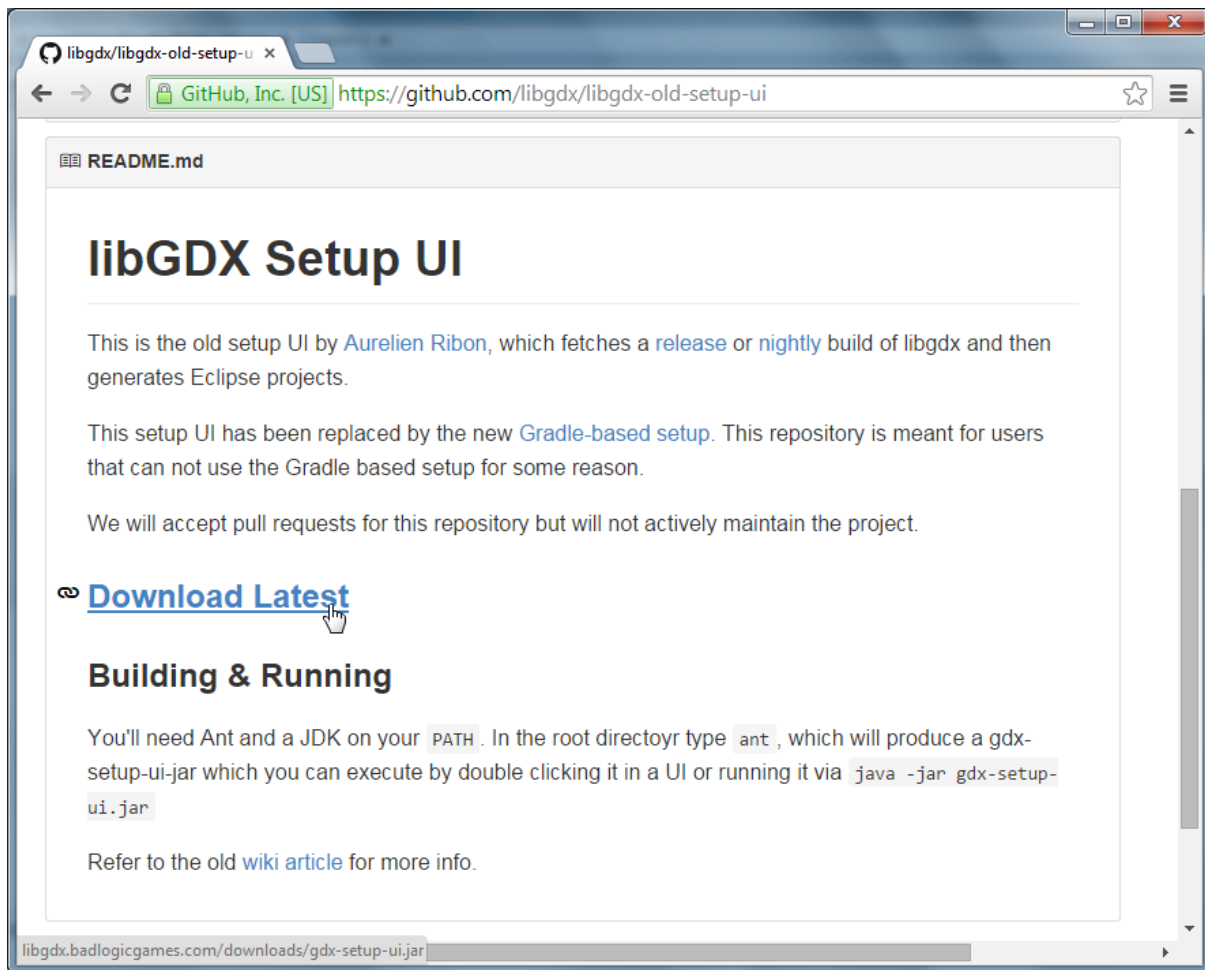
Show only the latest versions of available software Hide items that are already installed
 Group items by category What is [already installed](#)?
 Show only software applicable to target environment
 Contact all update sites during install to find required software

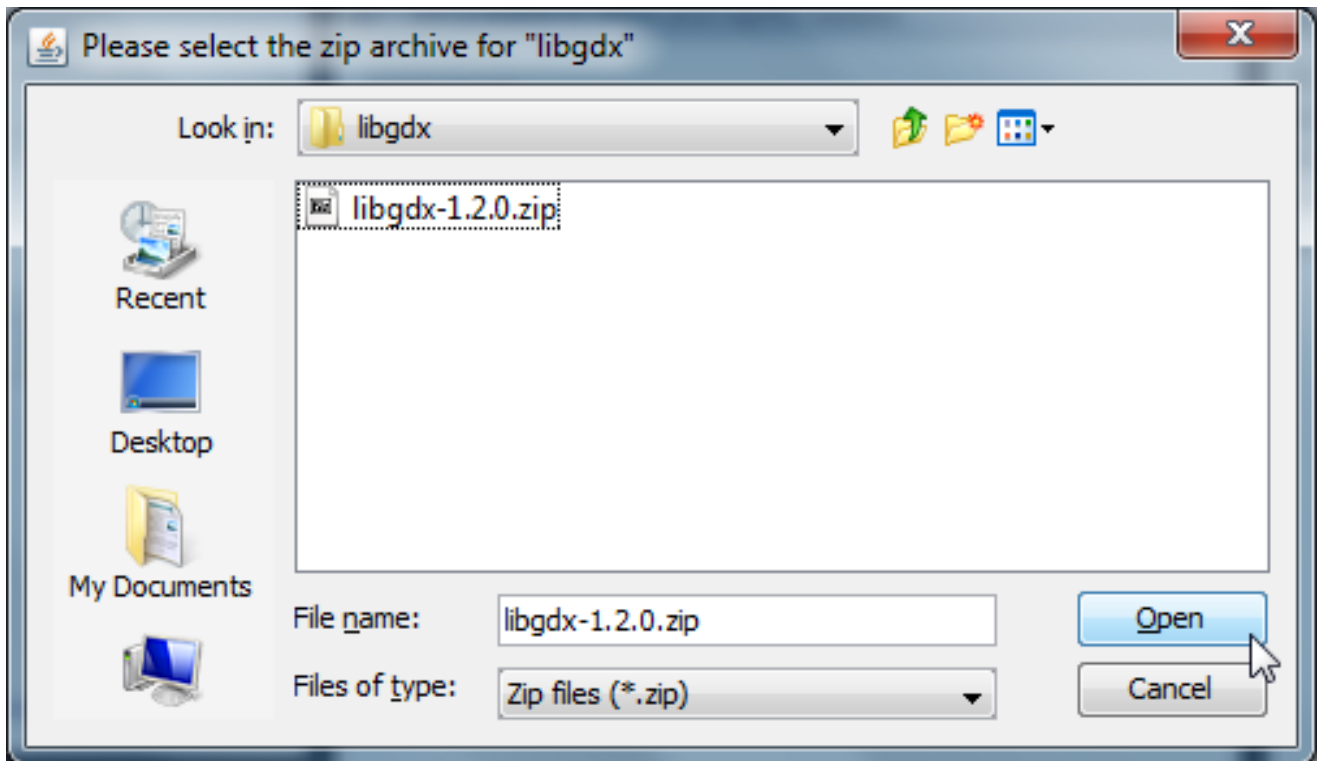
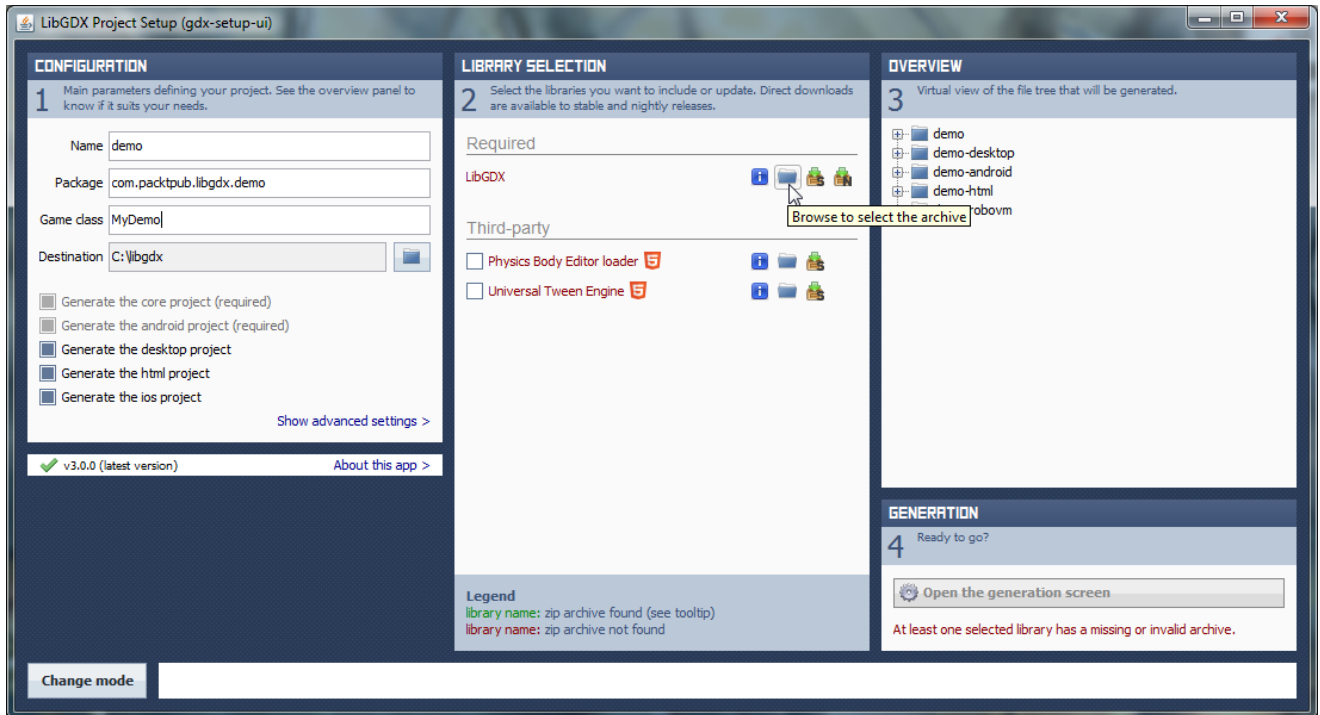


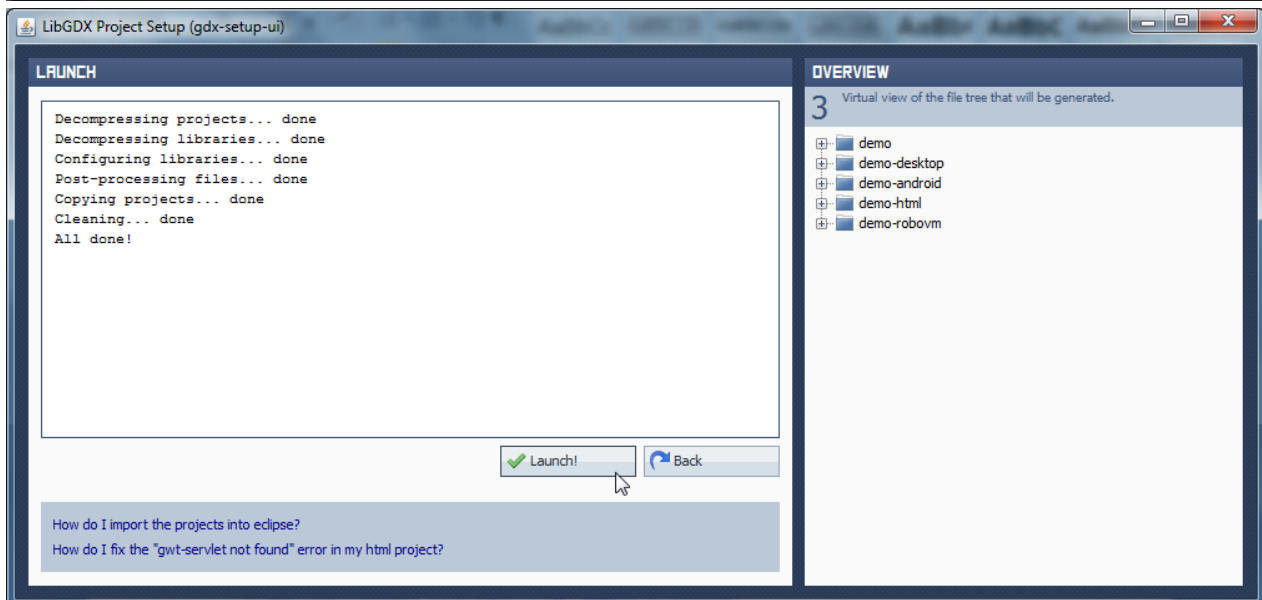
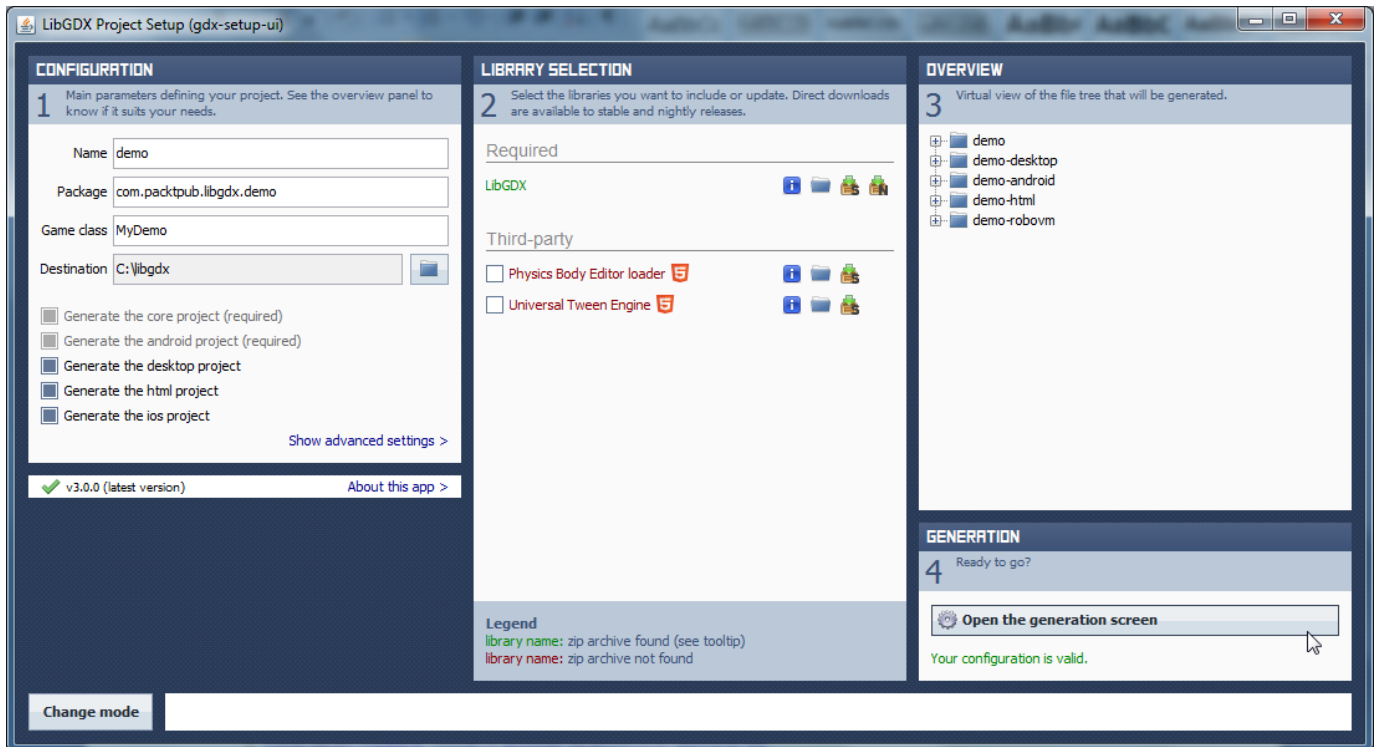


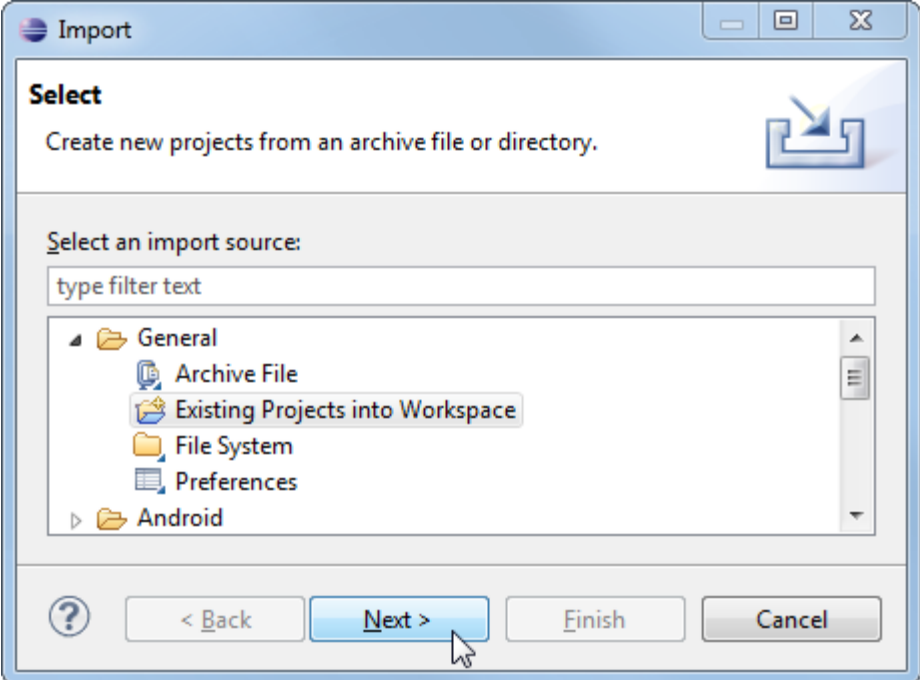


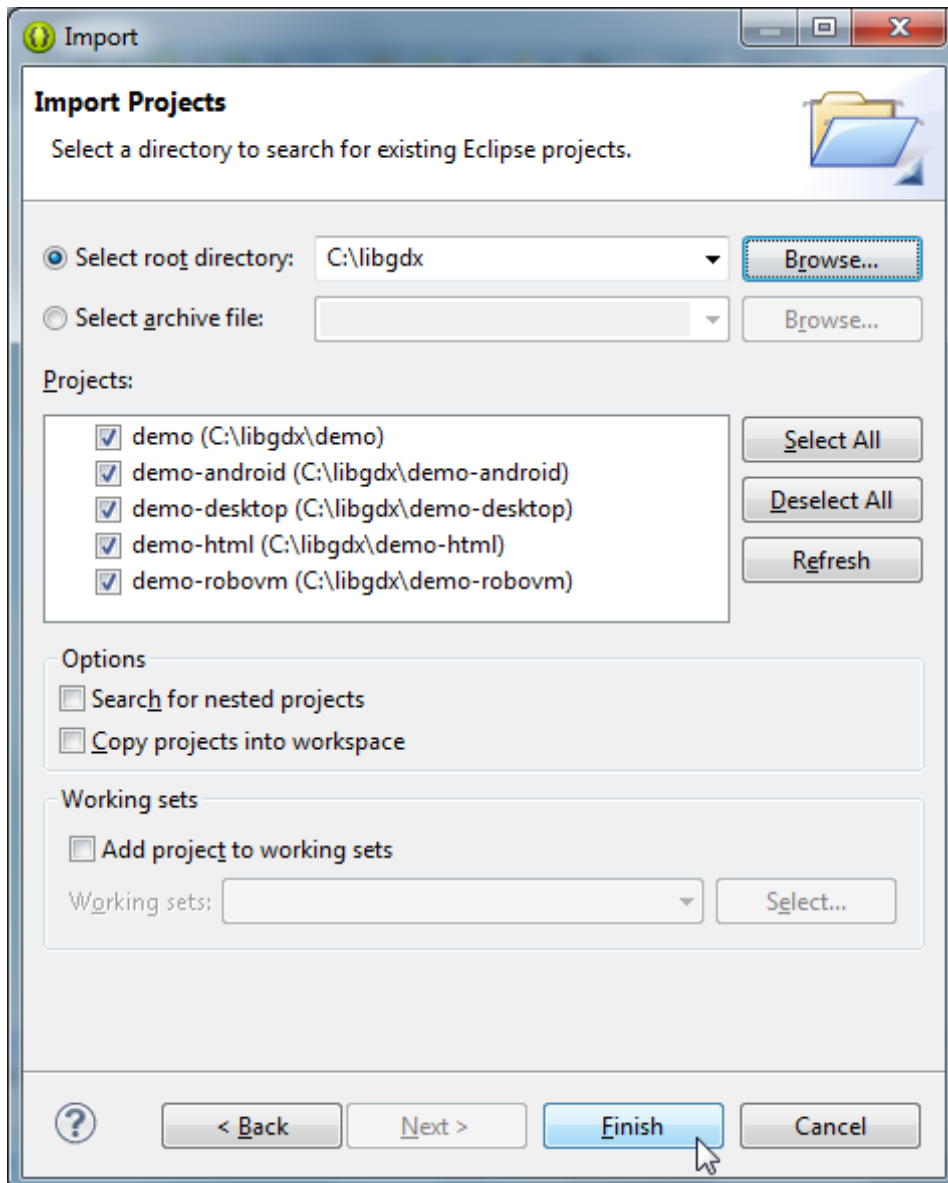


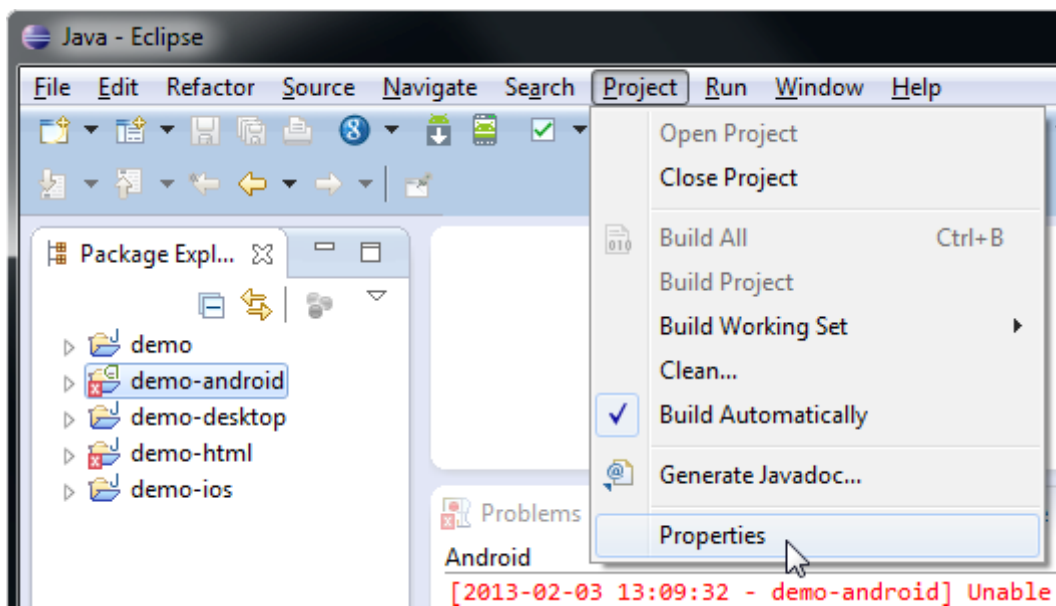
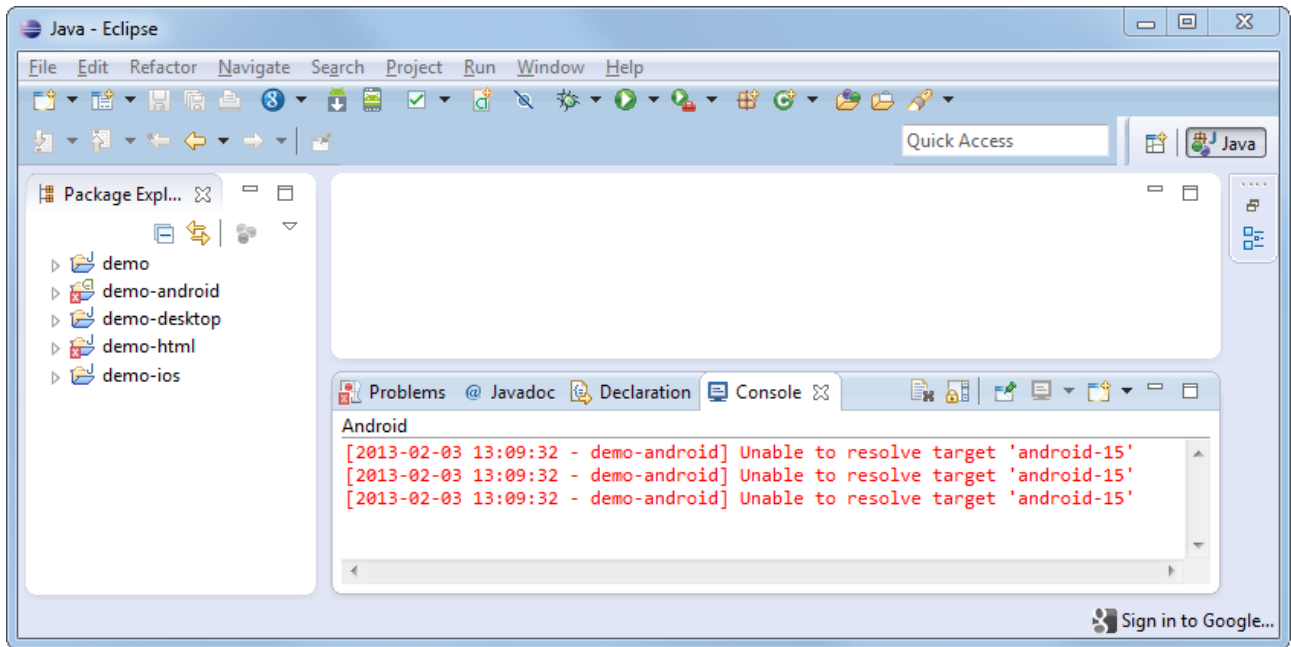


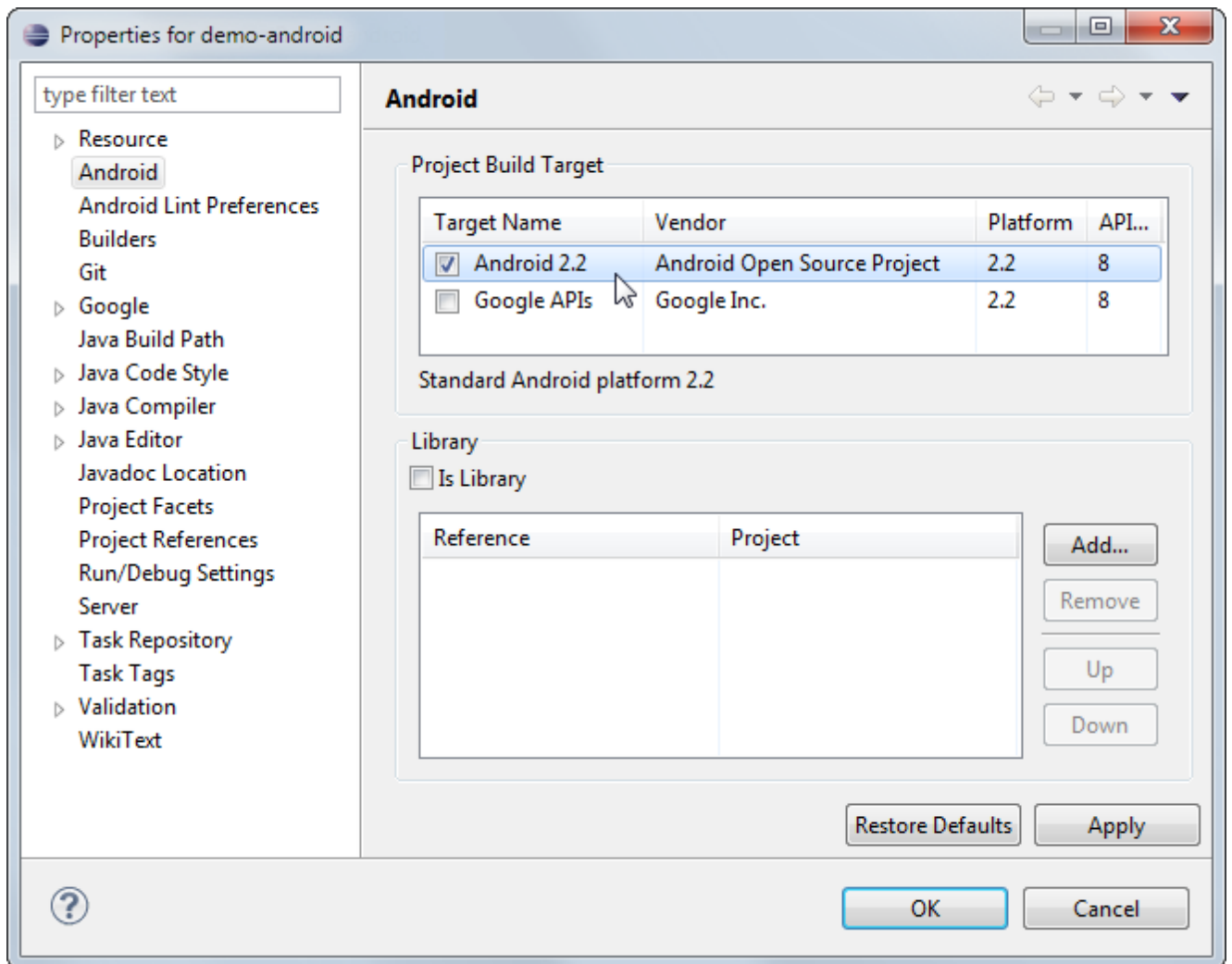


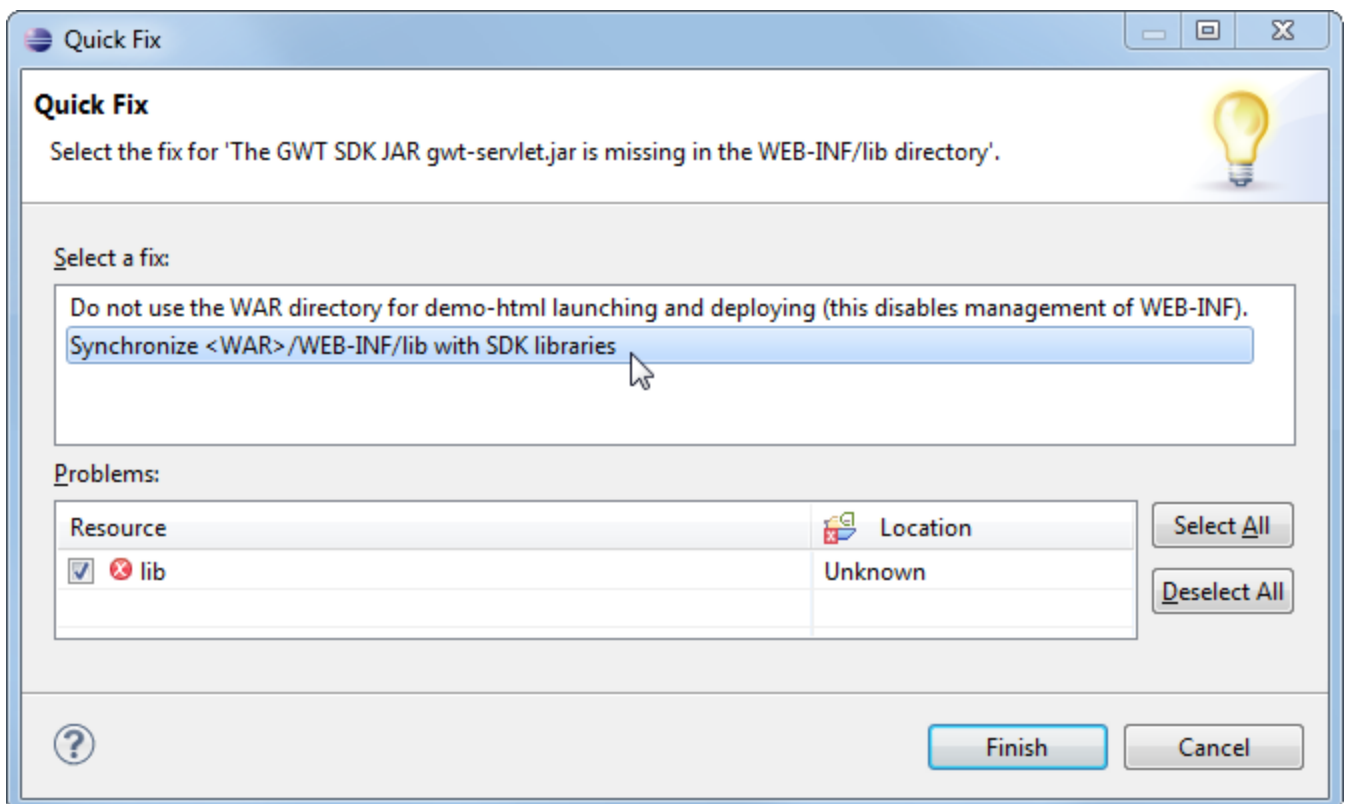
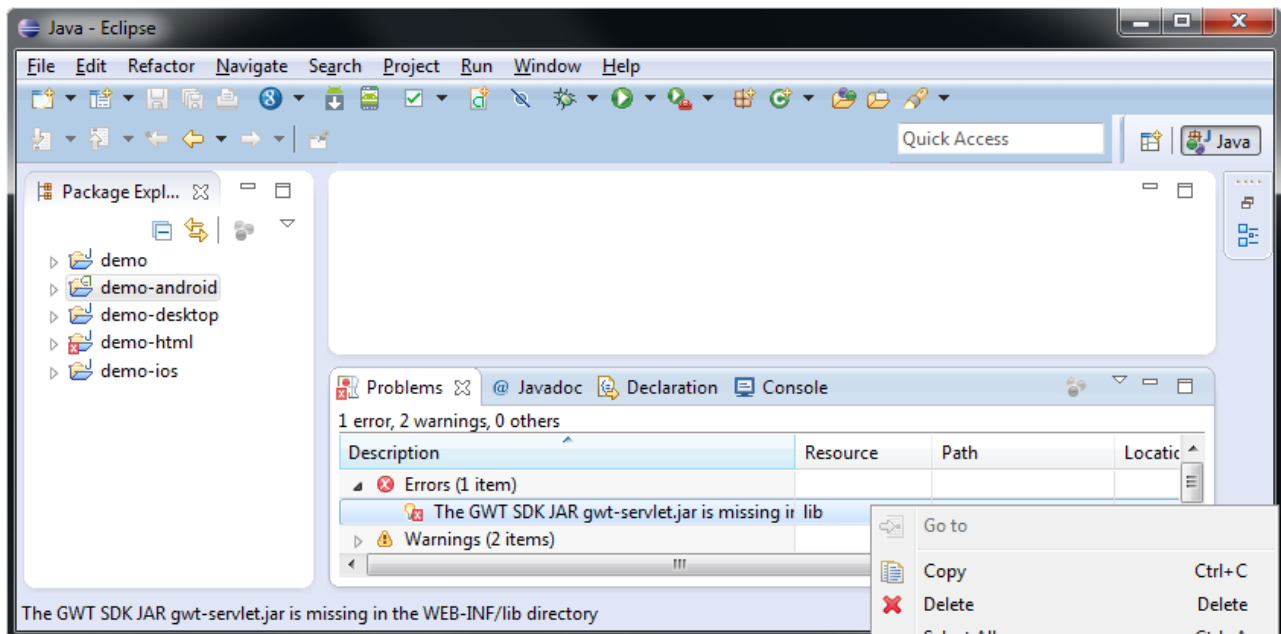














libGDX

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LibGDX uses a **Gradle based setup application** which will download all that's required automatically!

 [Download Setup App](#)

bitly.com/13C7B

Libgdx Project Generator

libGDX

PROJECT SETUP

Name:

Package:

Game class:

Destination:

Android SDK:

LibGDX Version:

Sub Projects

Desktop Android ios Html

Extensions

Bullet Freetype Tools Controllers Box2d

Box2dlights

Advanced Settings

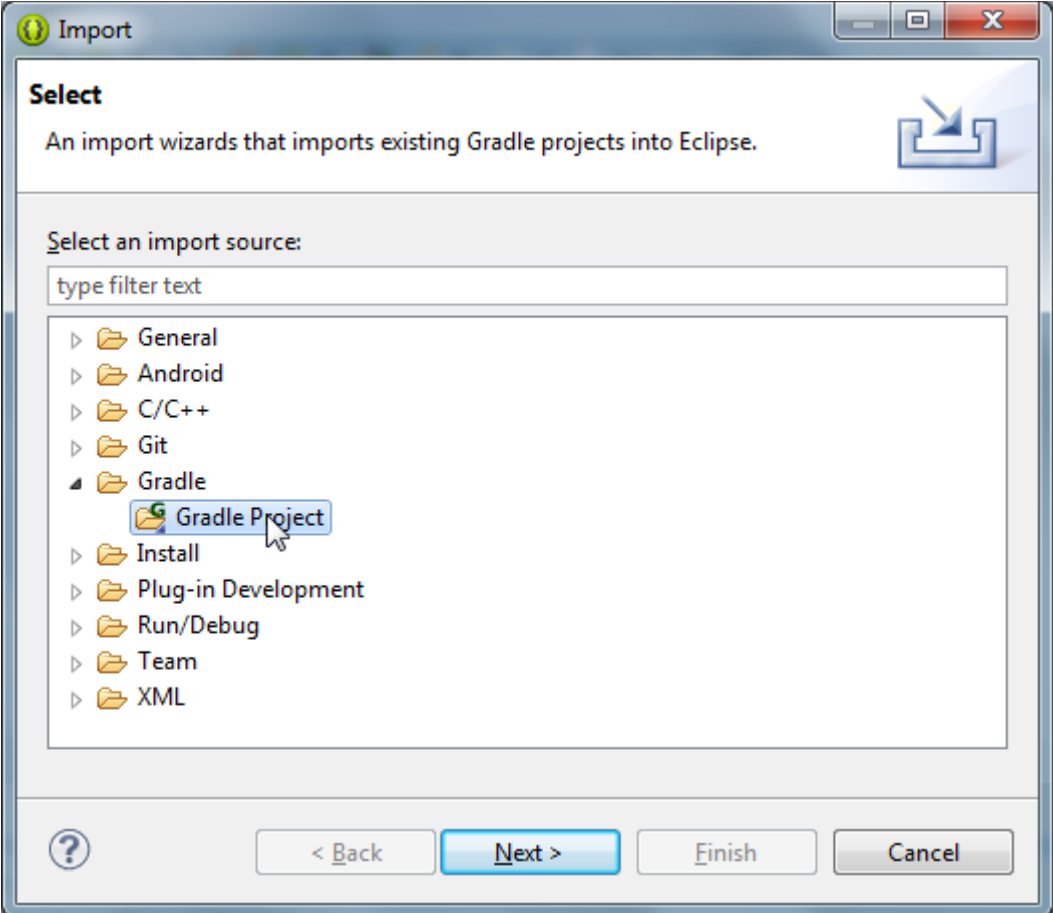
Settings	Description
Maven Mirror Url <input type="text"/>	Replaces Maven Central with this repository
IDEA <input type="checkbox"/>	Generates IntelliJ IDEA project files
Eclipse <input checked="" type="checkbox"/>	Generates Eclipse project files
Offline Mode <input type="checkbox"/>	Don't force download dependencies

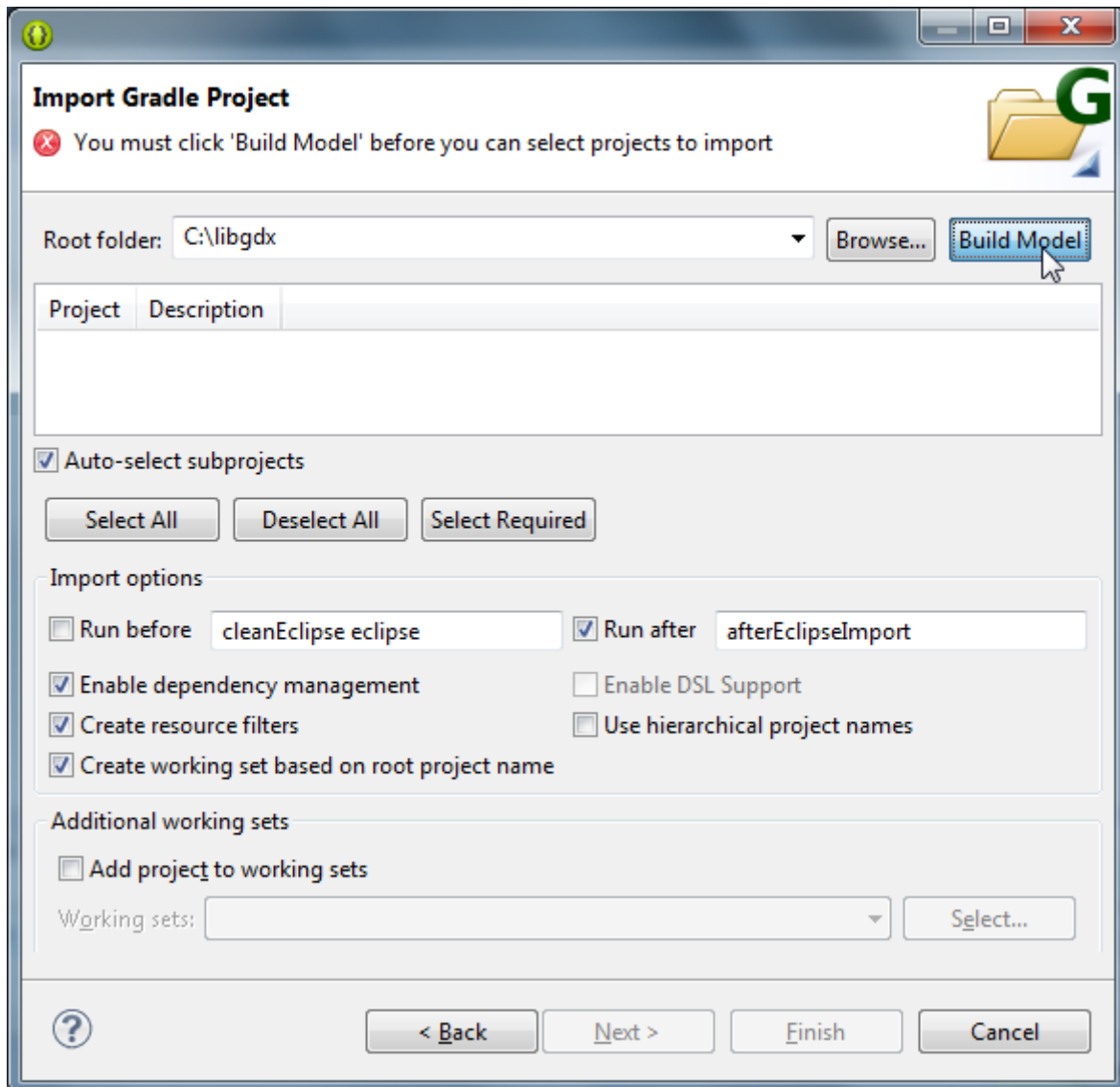
[Click for more info on using Gradle without IDE integration](#)

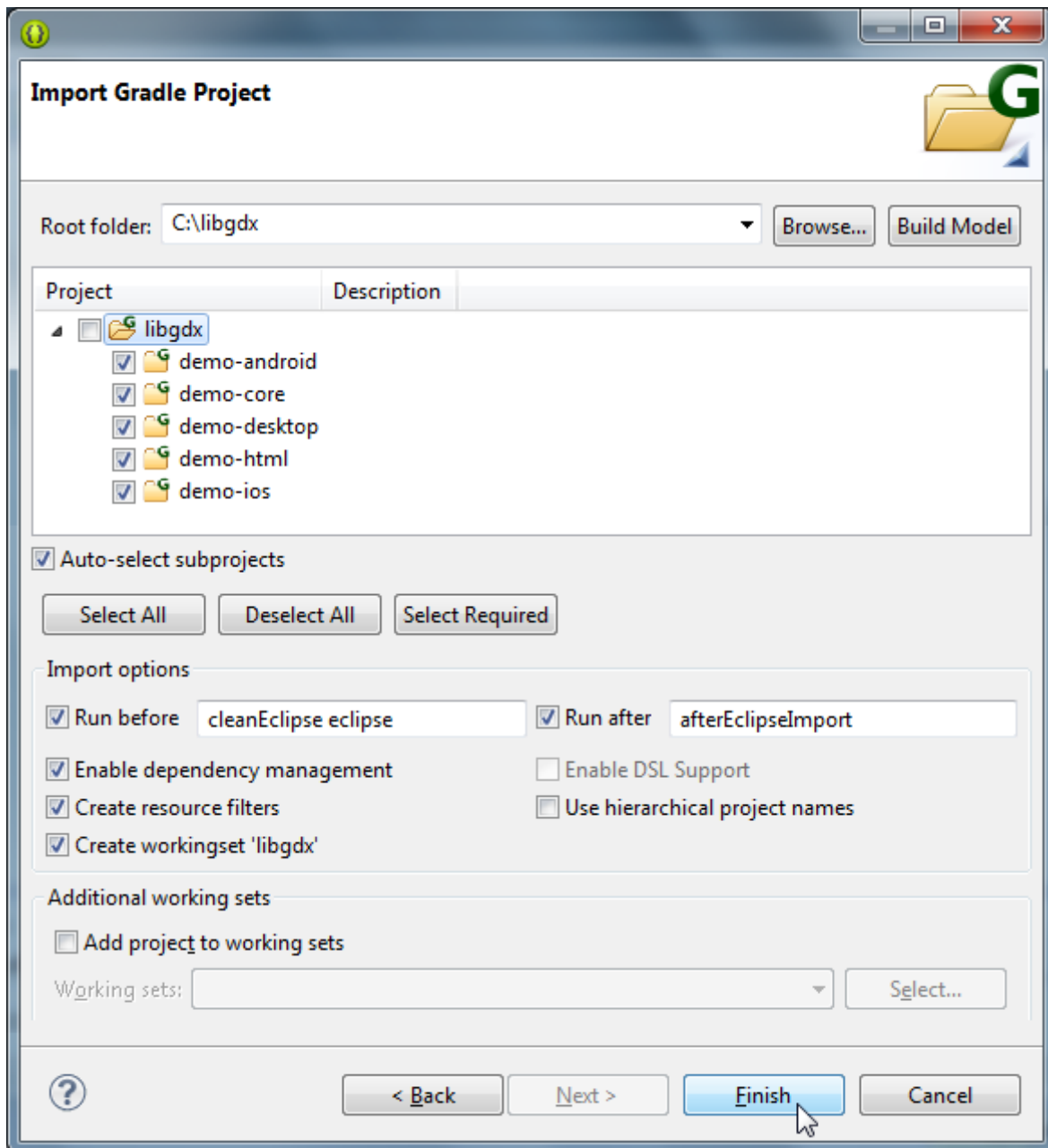
```
...@compc...
:desktop:afterEclipseImport

BUILD SUCCESSFUL

Total time: 48.454 secs
Done!
To import in Eclipse: File -> Import -> General -> Existing Projects into Workspace
To import to IntelliJ IDEA: File -> Open -> YourProject.ipr
```





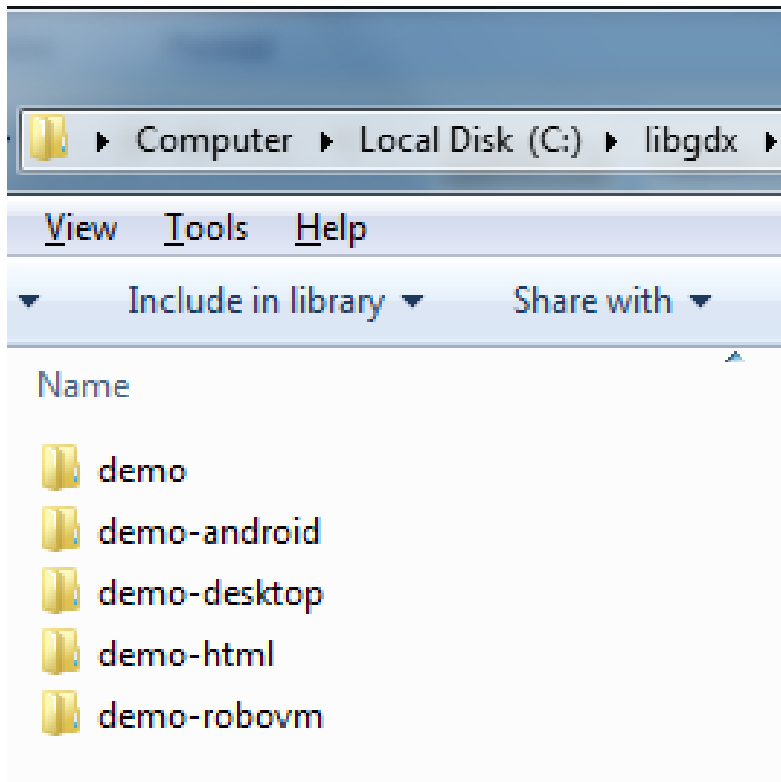


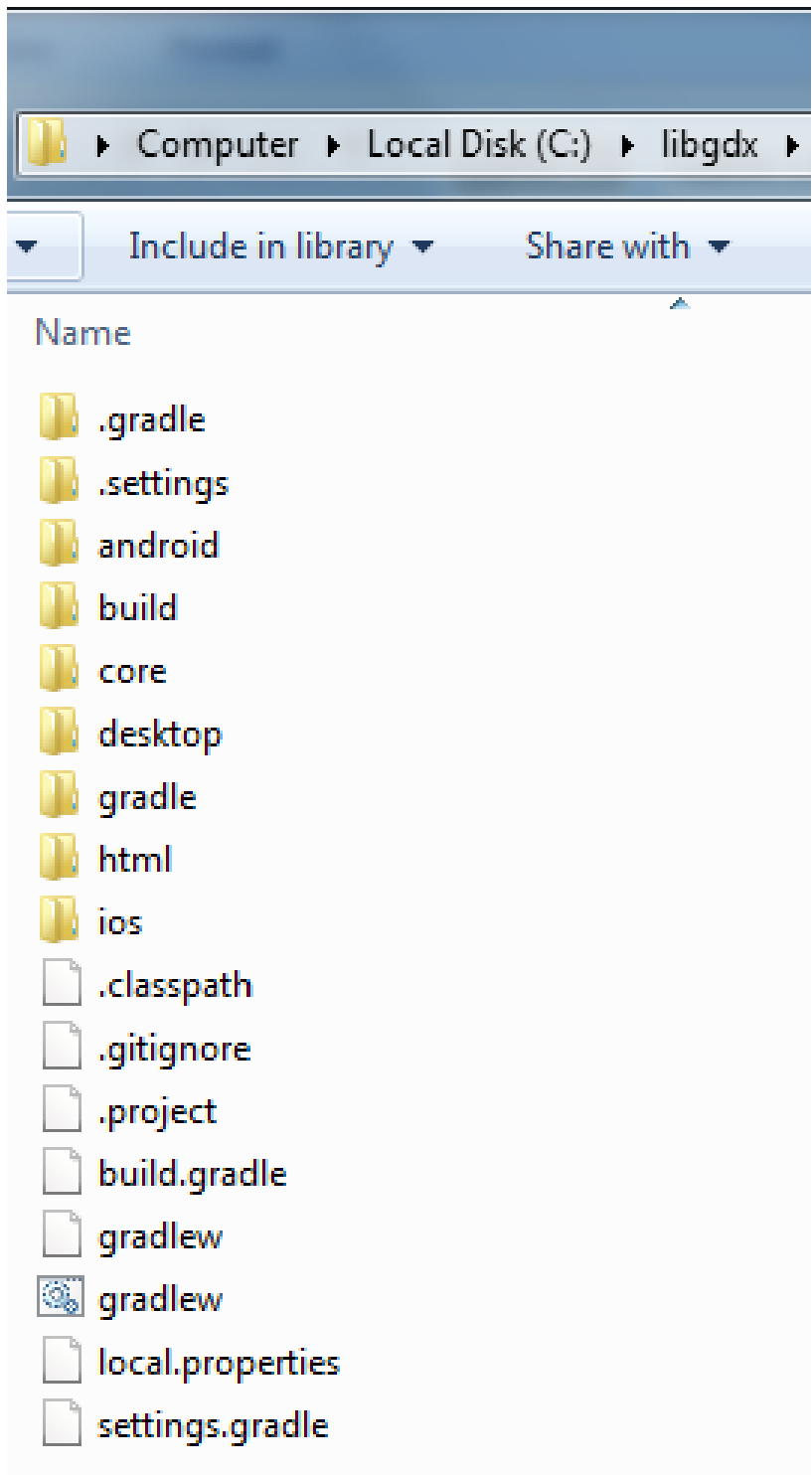
Gradle Based Setup Tool (gdx-setup)

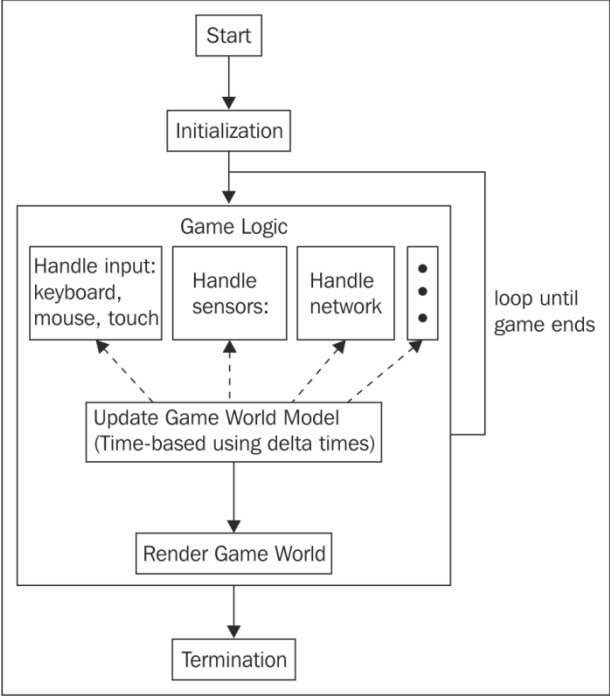
- demo-core
 - src
 - com.packtpub.libgdx.demo
 - MyDemo.java
 - MyDemo.gwt.xml
- demo-android
 - src
 - com.packtpub.libgdx.demo.android
 - AndroidLauncher.java
- demo-desktop
 - src
 - com.packtpub.libgdx.demo.desktop
 - DesktopLauncher.java
- demo-html
 - src
 - com.packtpub.libgdx.demo
 - GdxDefinition.gwt.xml
 - GdxDefinitionSuperdev.gwt.xml
 - com.packtpub.libgdx.demo.client
 - HtmlLauncher.java
- demo-ios
 - src
 - com.packtpub.libgdx.demo
 - IOSLauncher.java

Old Project Setup Tool (gdx-setup-ui)

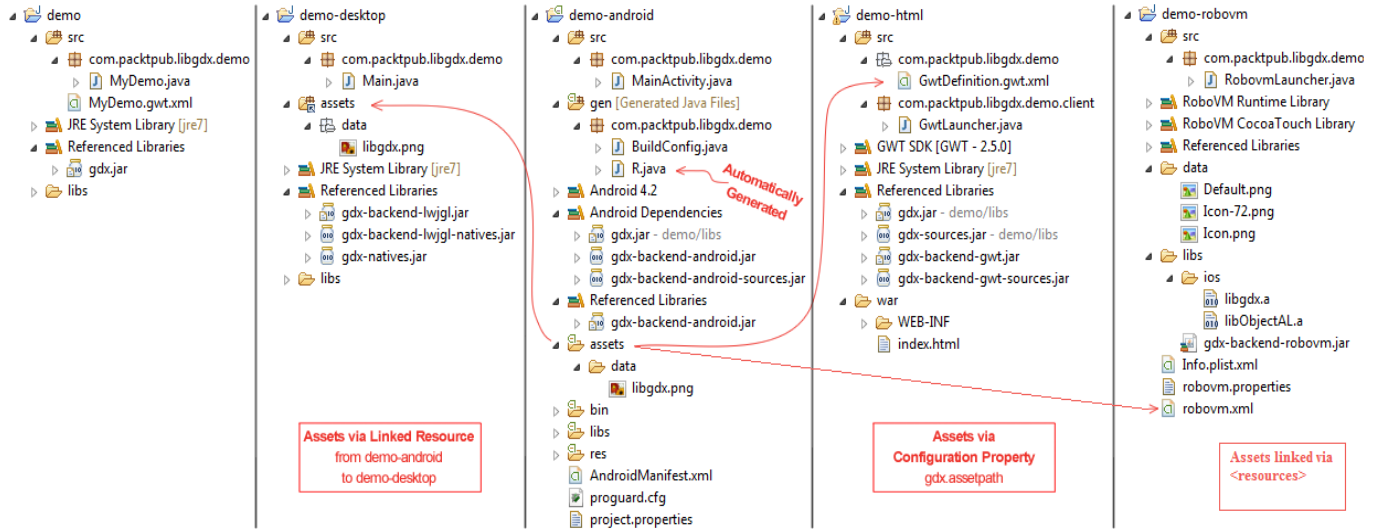
- demo
 - src
 - com.packtpub.libgdx.demo
 - MyDemo.java
 - MyDemo.gwt.xml
- demo-android
 - src
 - com.packtpub.libgdx.demo
 - MainActivity.java
- demo-desktop
 - src
 - com.packtpub.libgdx.demo
 - Main.java
- demo-html
 - src
 - com.packtpub.libgdx.demo
 - GwtDefinition.gwt.xml
 - com.packtpub.libgdx.demo.client
 - GwtLauncher.java
- demo-robvm
 - src
 - com.packtpub.libgdx.demo
 - RobovmLauncher.java

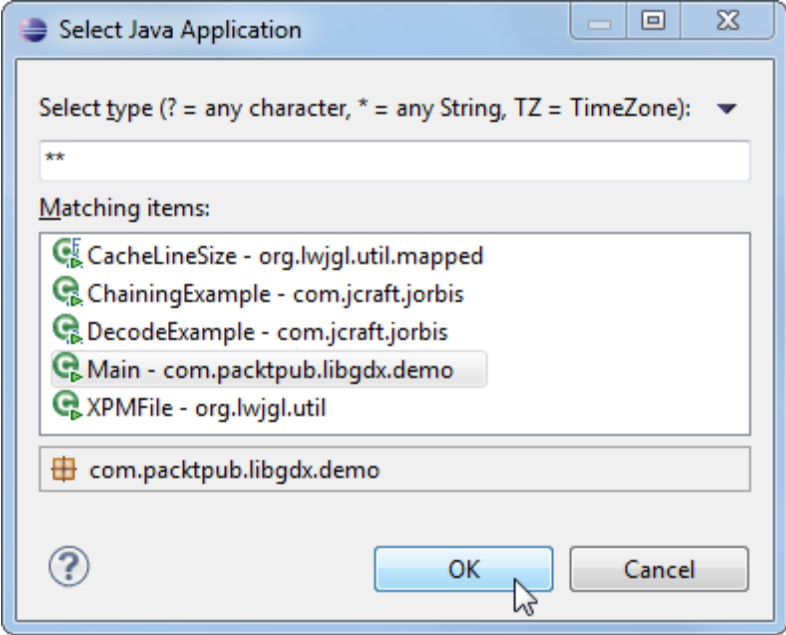
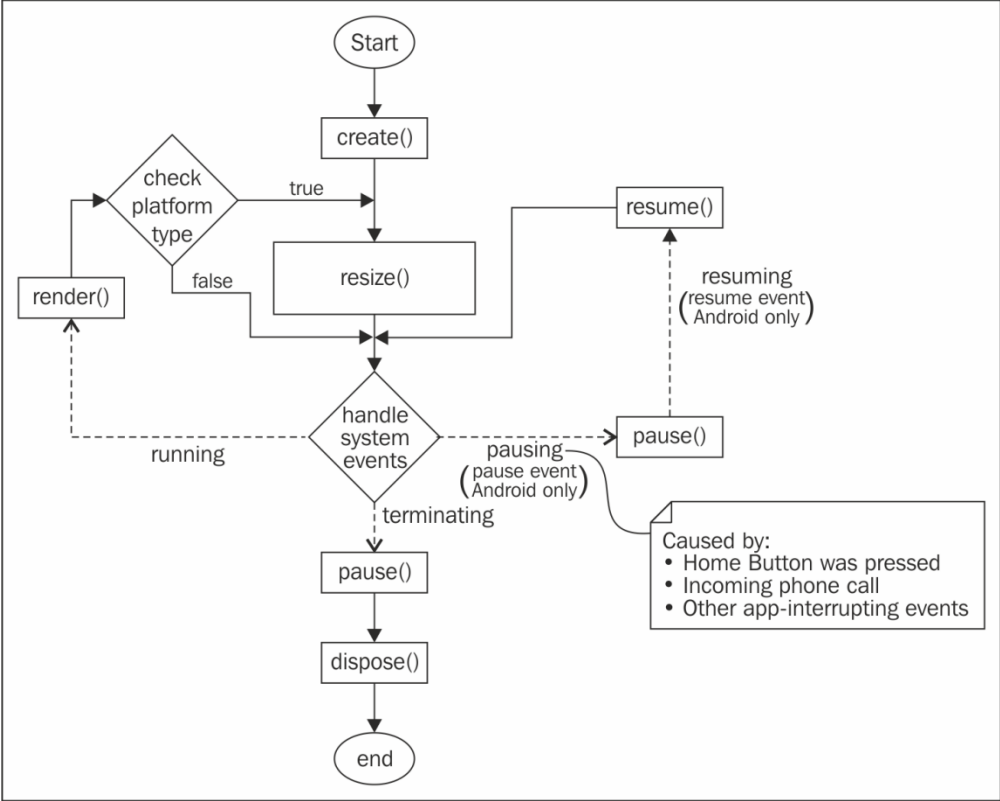




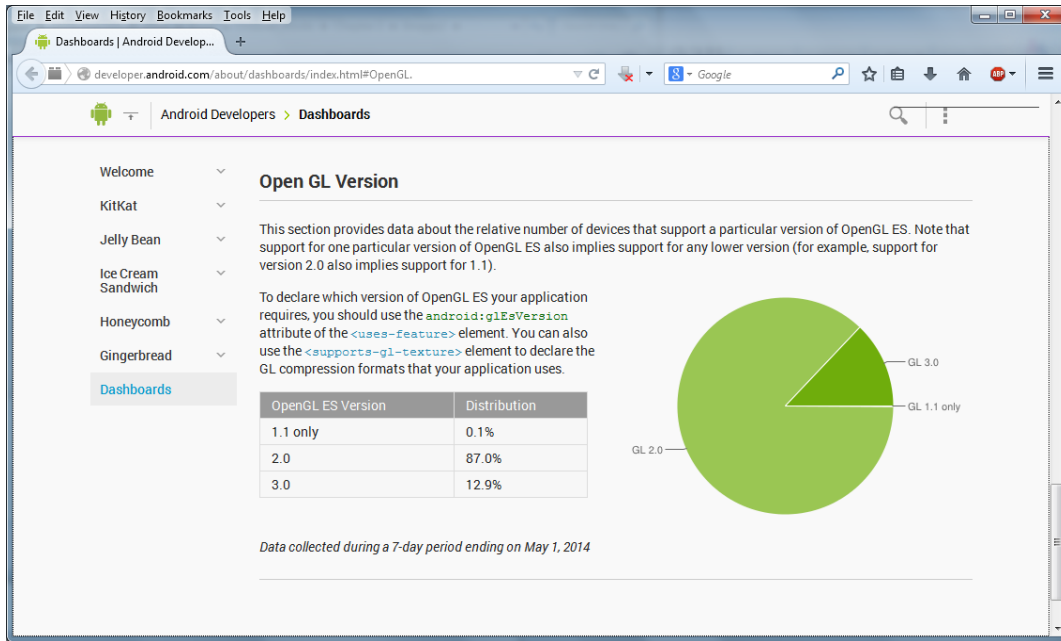


2 Cross-platform Development – Build Once, Deploy Anywhere









```
android:configChanges="keyboard/keyboardHidden/orientation/screenSize">
```

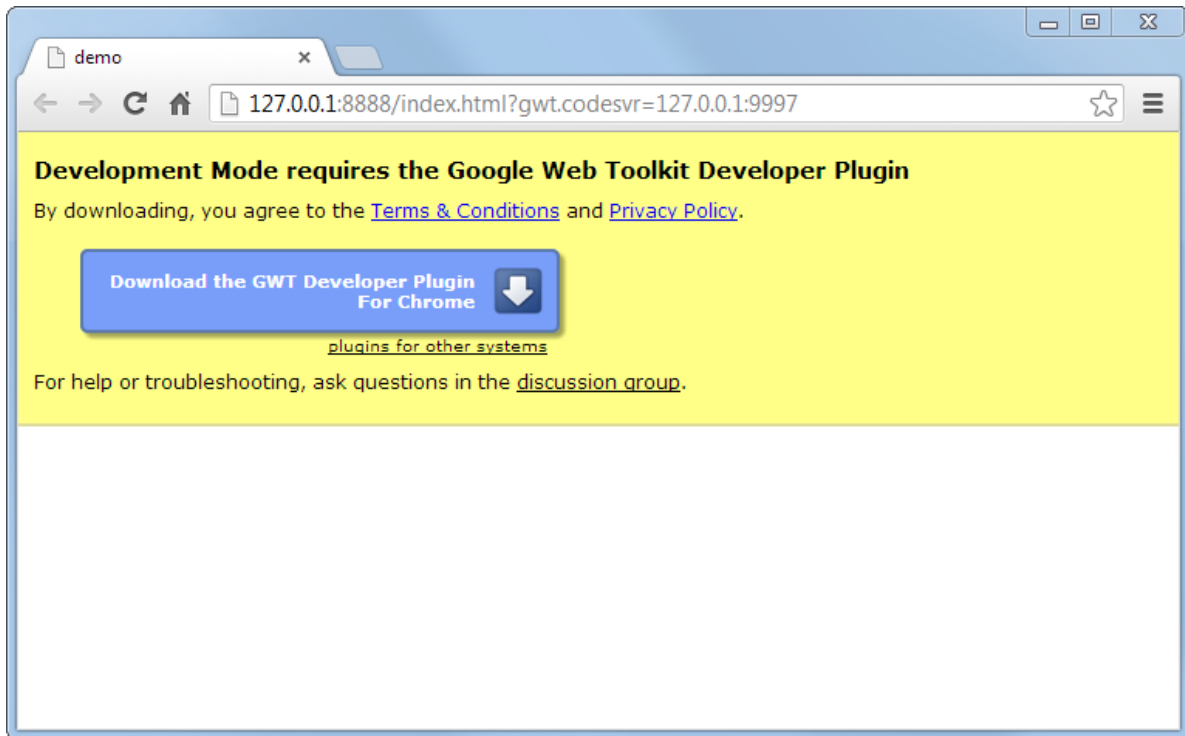


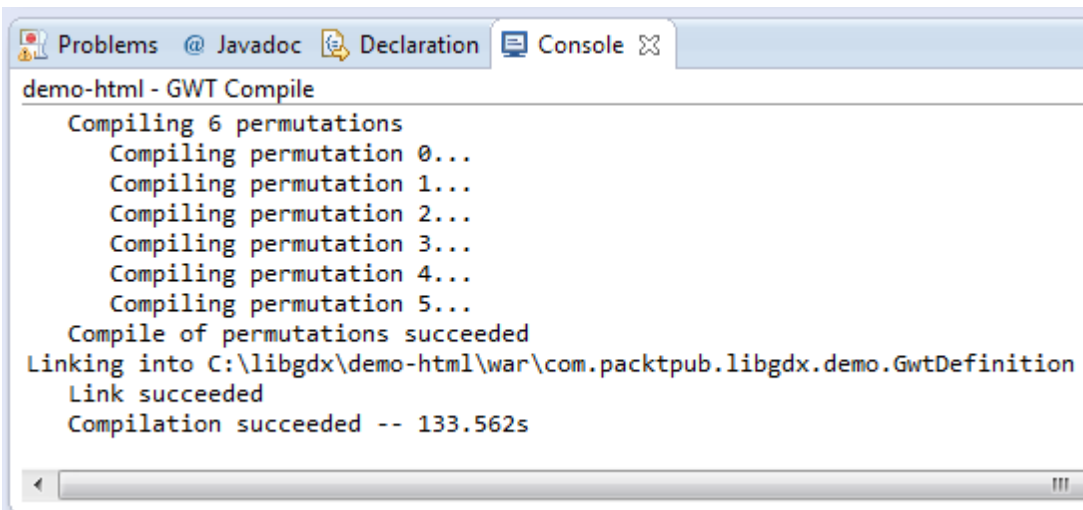
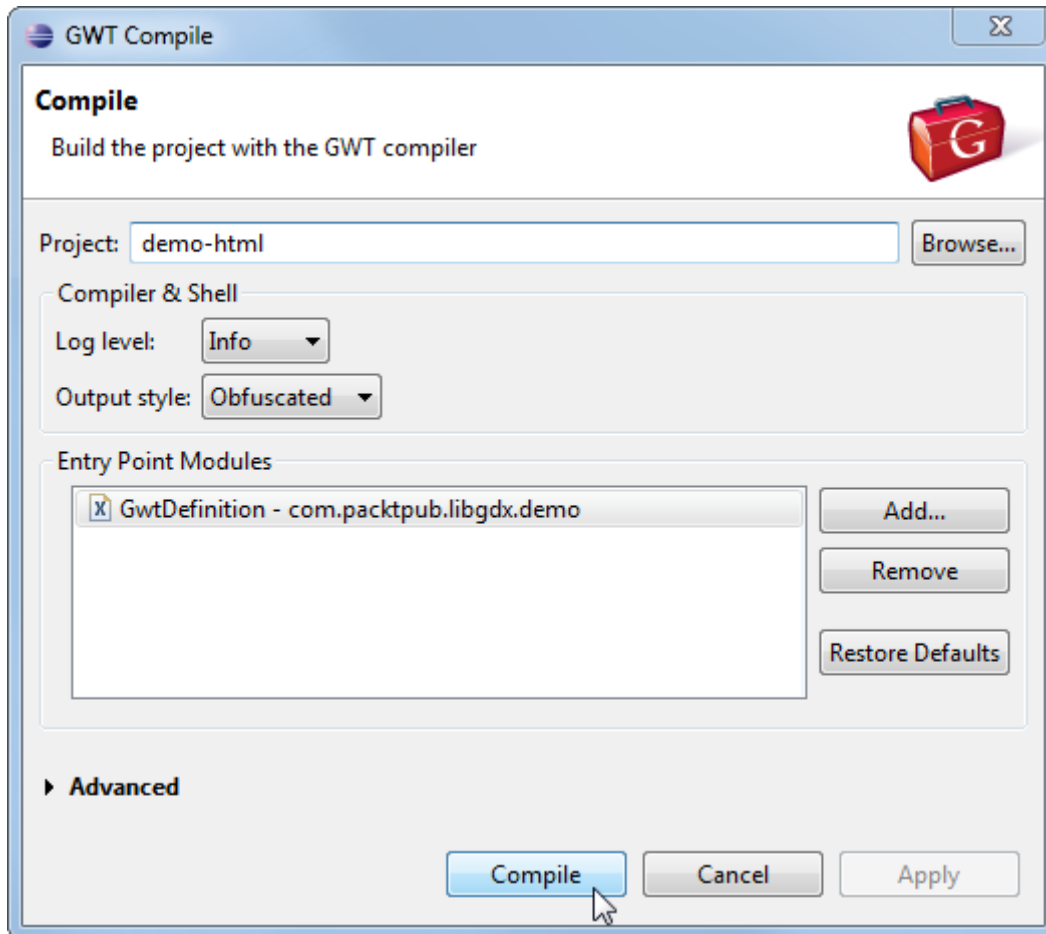
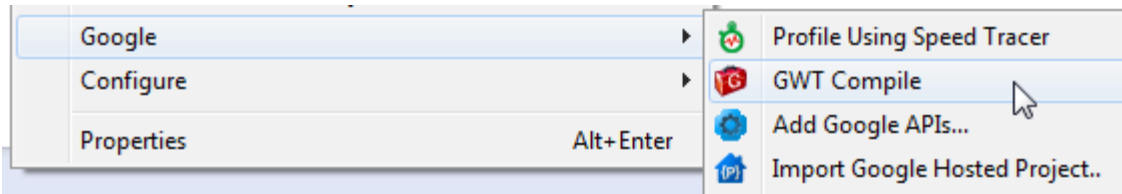
Problems @ Javadoc Declaration Console Development Mode

index.html (1)

Double-click to open a URL (or right-click for more options). Click the yellow 'Reload'

http://127.0.0.1:8888/index.html?gwt.codesvr=127.0.0.1:9997





- demo-html
 - src
 - GWT SDK [GWT - 2.5.0]
 - JRE System Library [jre7]
 - Referenced Libraries
 - war
 - assets
 - com.packtpub.libgdx.demo.GwtDefinition
 - WEB-INF
 - index.html



libGDX

LibGDX is a cross-platform 2D and 3D game development framework written in Java/C/C++. It's free for commercial and non-commercial use, pretty powerful and lots of fun to work with! Or at least no-one complained yet. Write your game once, deploy to Windows, Linux, Mac OSX and Android!



```
camera = new OrthographicCamera(1, h/w);
batch = new SpriteBatch();

texture = new Texture(Gdx.files.internal("data/libgdx.png"));
texture.setFilter(TextureFilter.Linear, TextureFilter.Linear);
```

The screenshot shows an IDE window titled "Debug - demo-core/src/com/packtpub/libgdx/demo/MyDemo.java - ADT". The main editor displays the following code:

```
float w = Gdx.graphics.getWidth();
float h = Gdx.graphics.getHeight();
camera = new OrthographicCamera(1, h / w);
batch = new SpriteBatch();

texture = new Texture(Gdx.files.internal("data/libgdx.png"));
texture.setFilter(TextureFilter.Linear, TextureFilter.Linear);

TextureRegion region = new TextureRegion(texture, 0, 0, 512, 275);

sprite = new Sprite(region);
sprite.setSize(0.9f, 0.9f * sprite.getHeight() / sprite.getWidth());
sprite.setOrigin(sprite.getWidth() / 2, sprite.getHeight() / 2);
```

The "Variables" window on the right shows the following state:

Name	Value
this	MyDemo (id=20)
batch	null
camera	OrthographicCamera (id=23)
sprite	null
texture	null
w	480.0
h	320.0

The "Debug Console" at the bottom shows the execution progress, with the current line of code being line 42: `batch = new SpriteBatch();`. The status bar at the bottom indicates "1:1" and "167M of 297M".



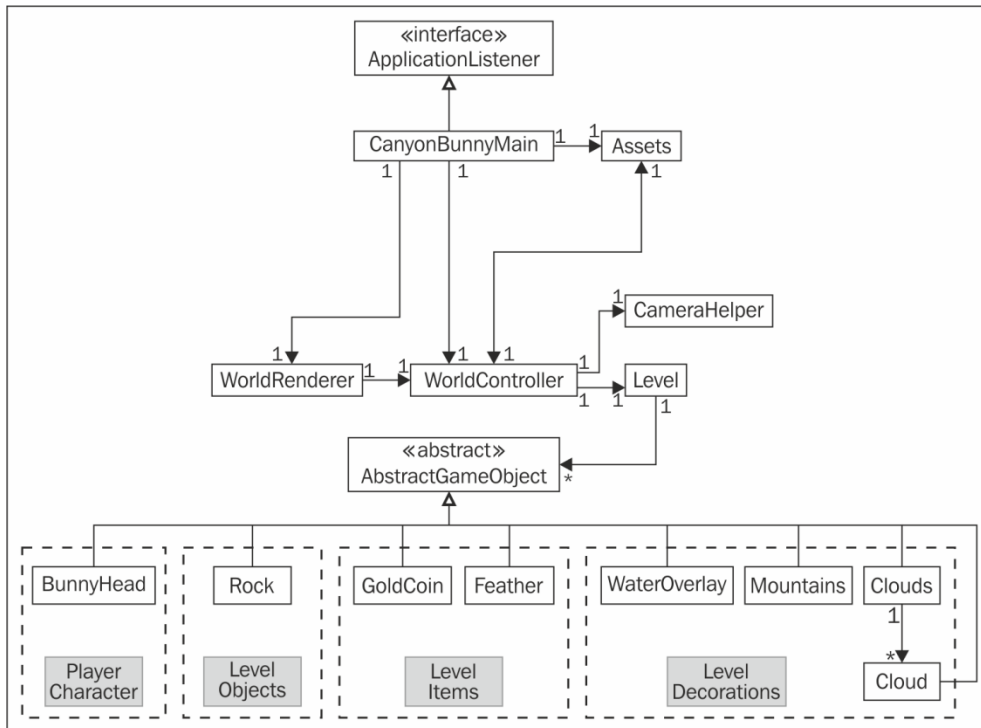
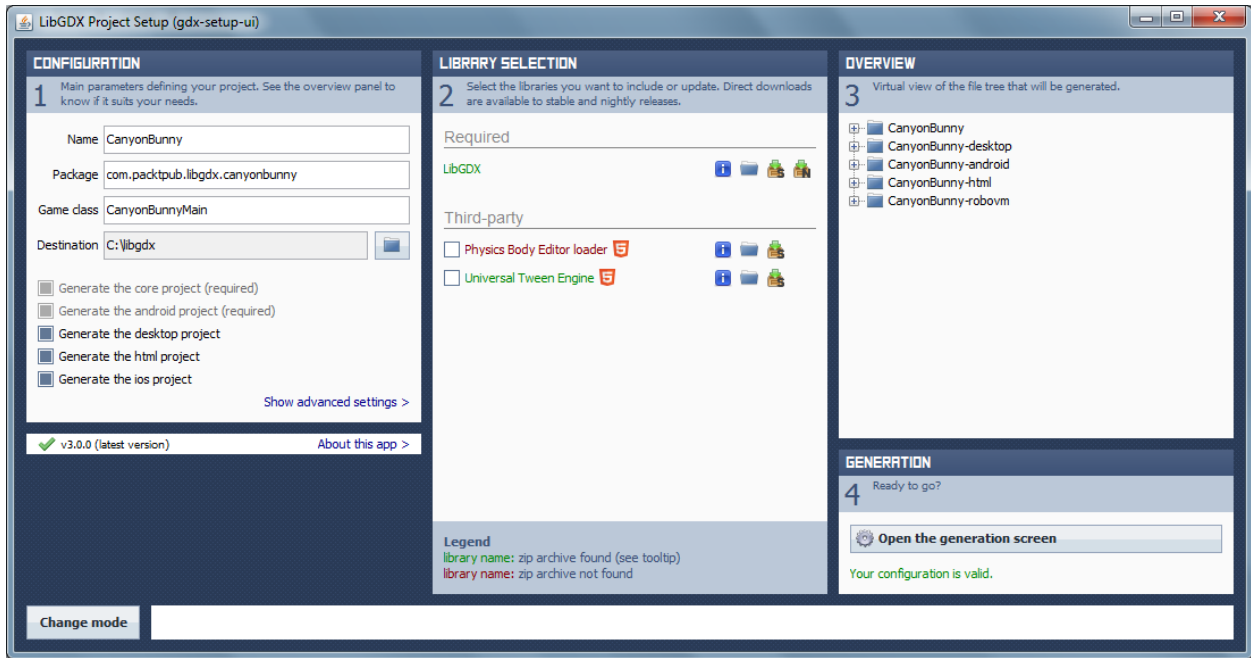
Rotation

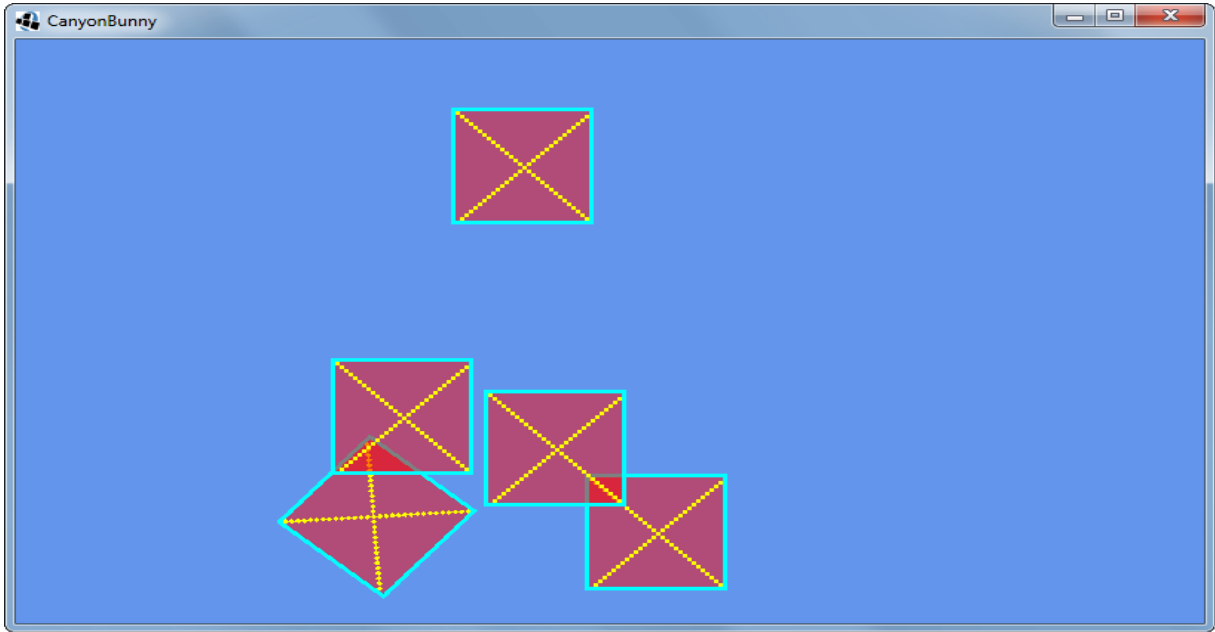
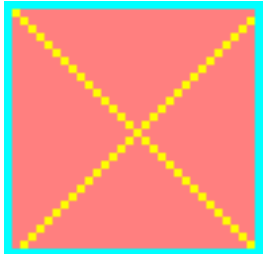
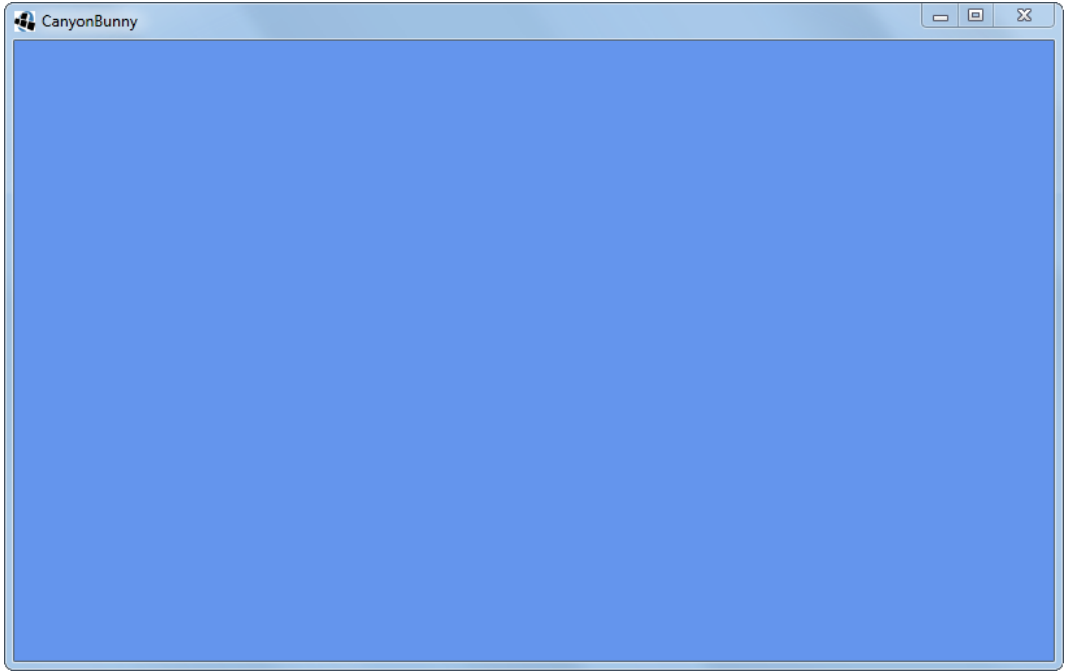


Shake

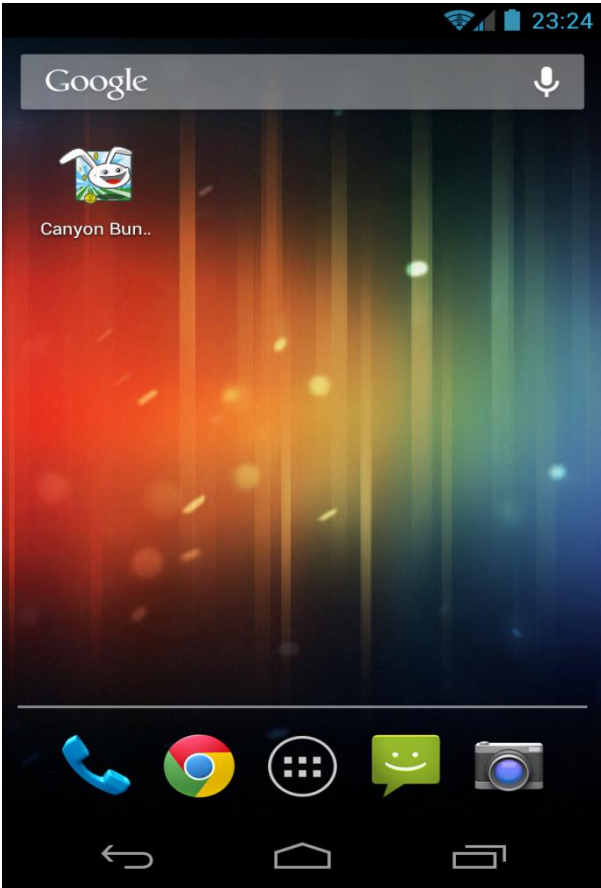
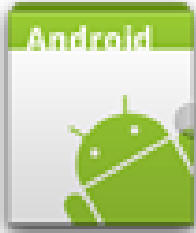


3 Configuring the Game

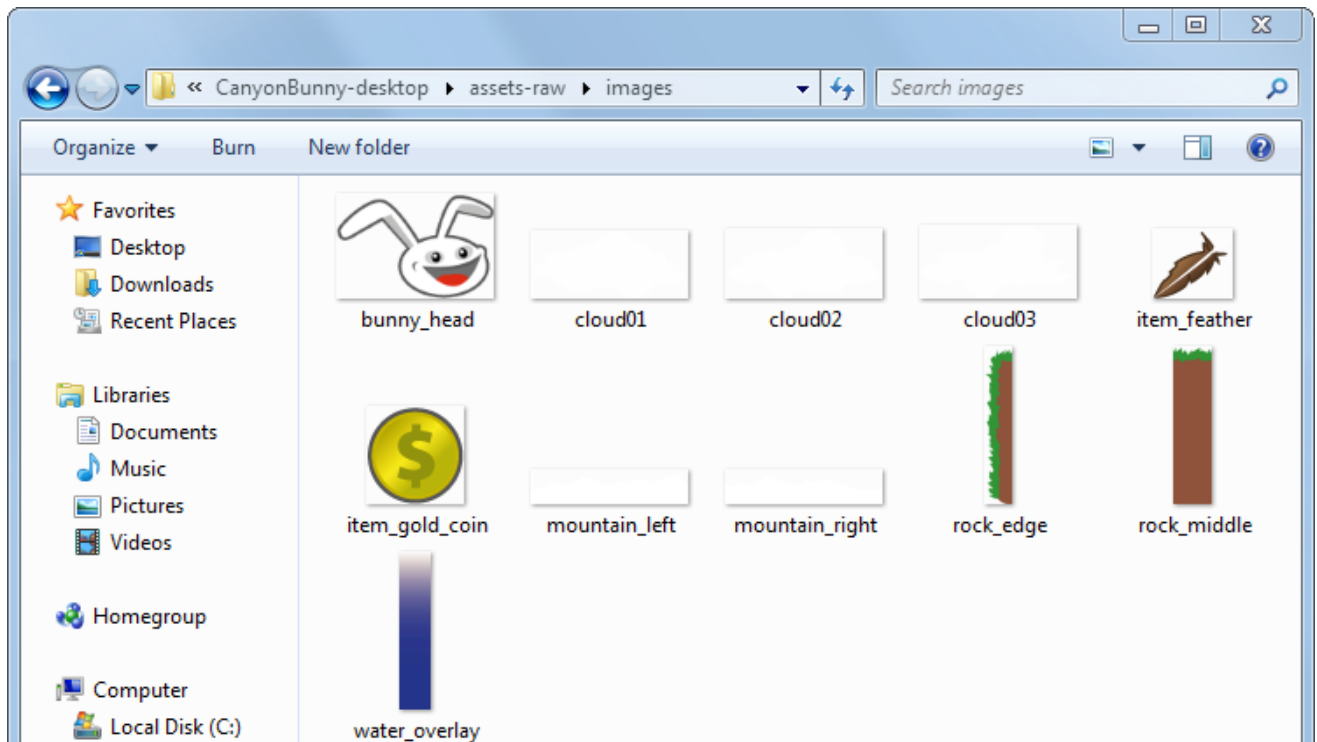


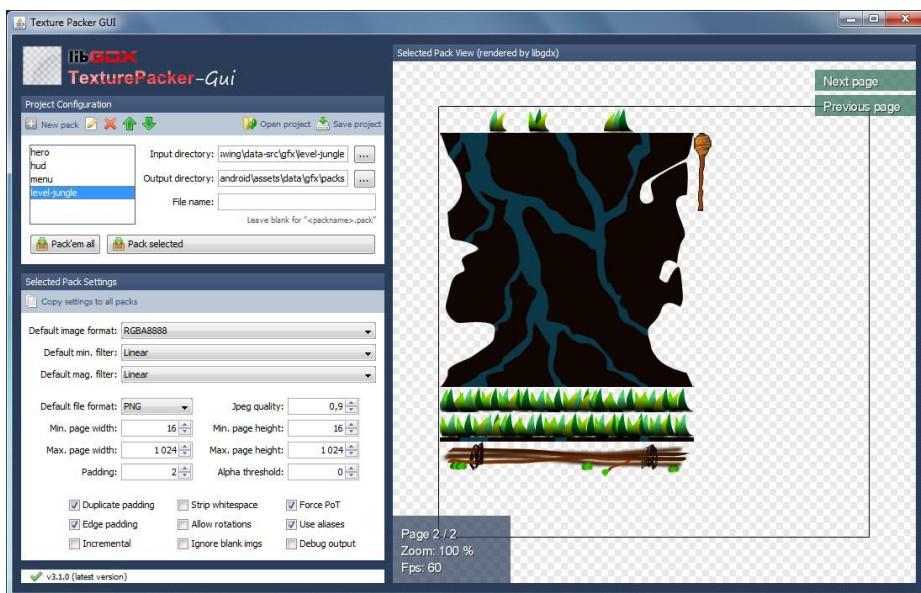
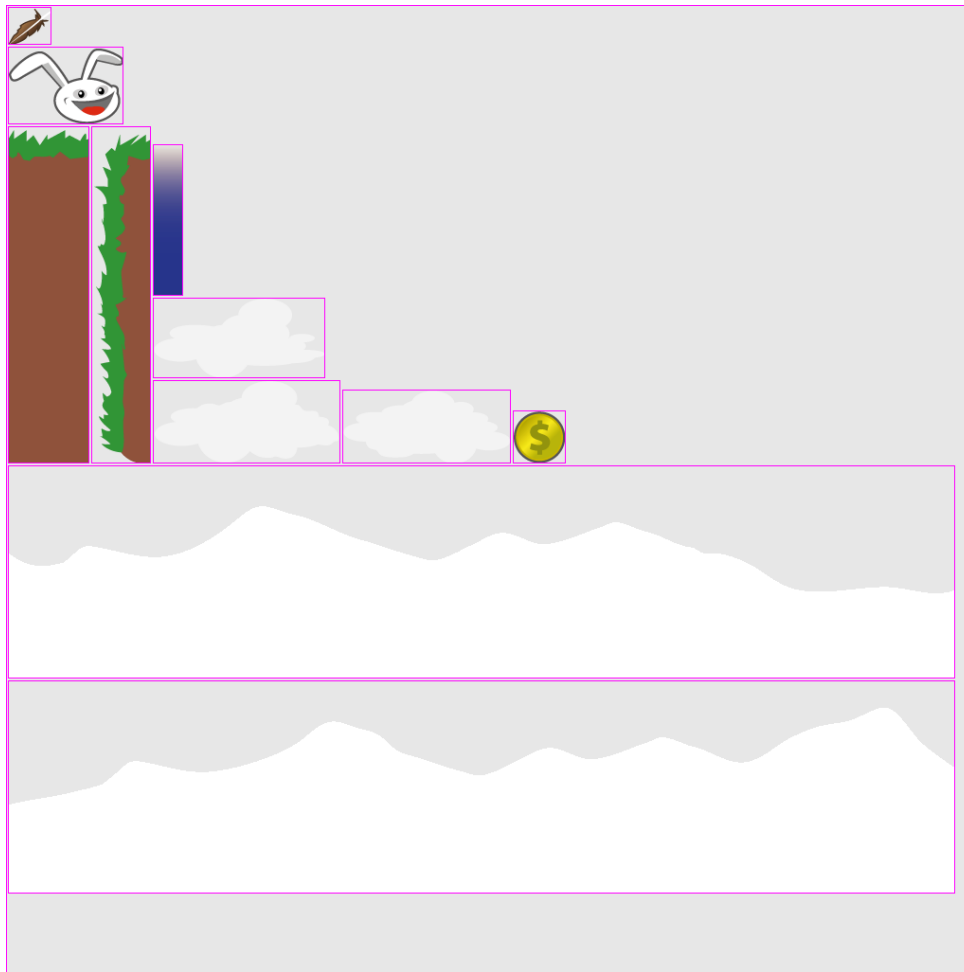


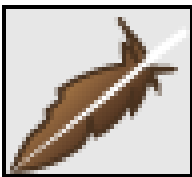
4 Gathering Resources

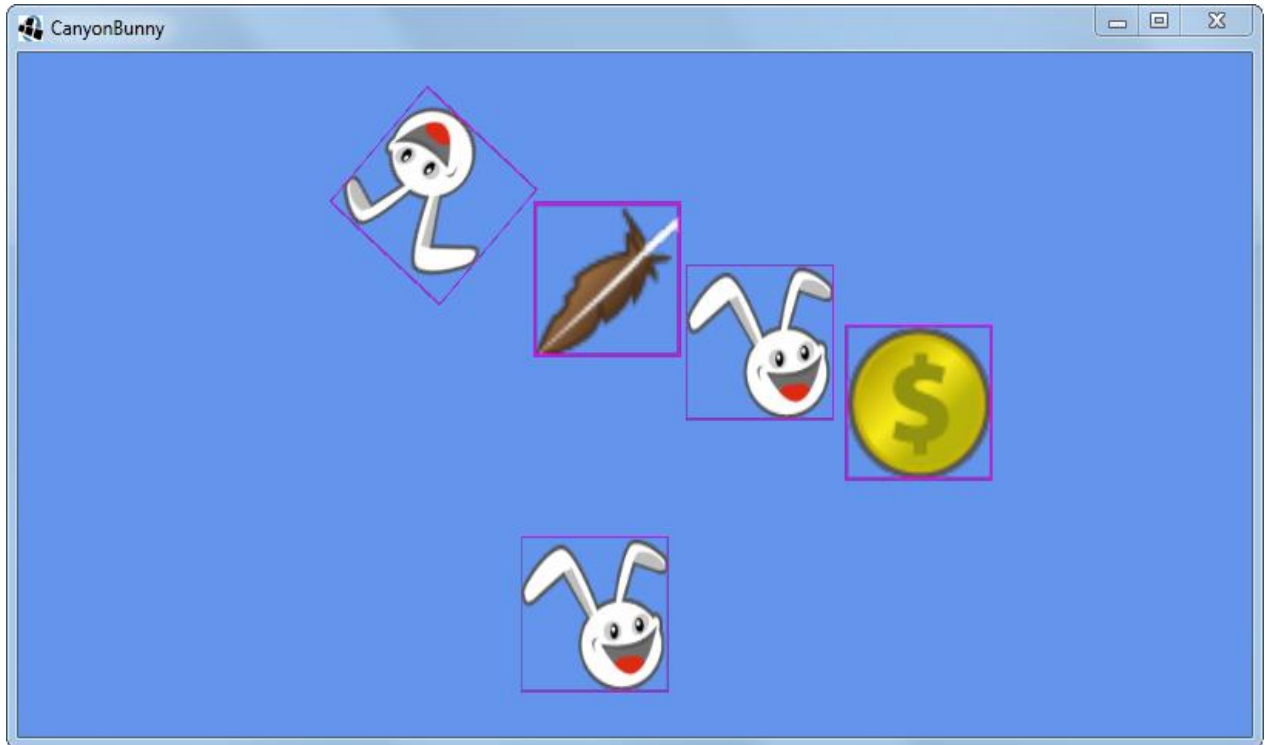
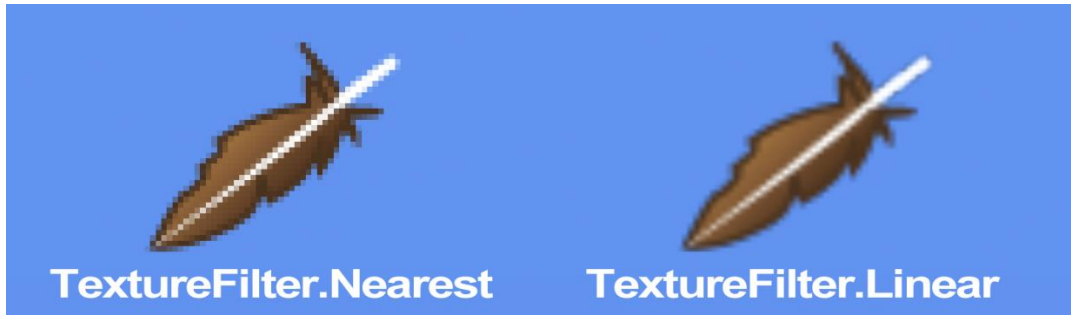


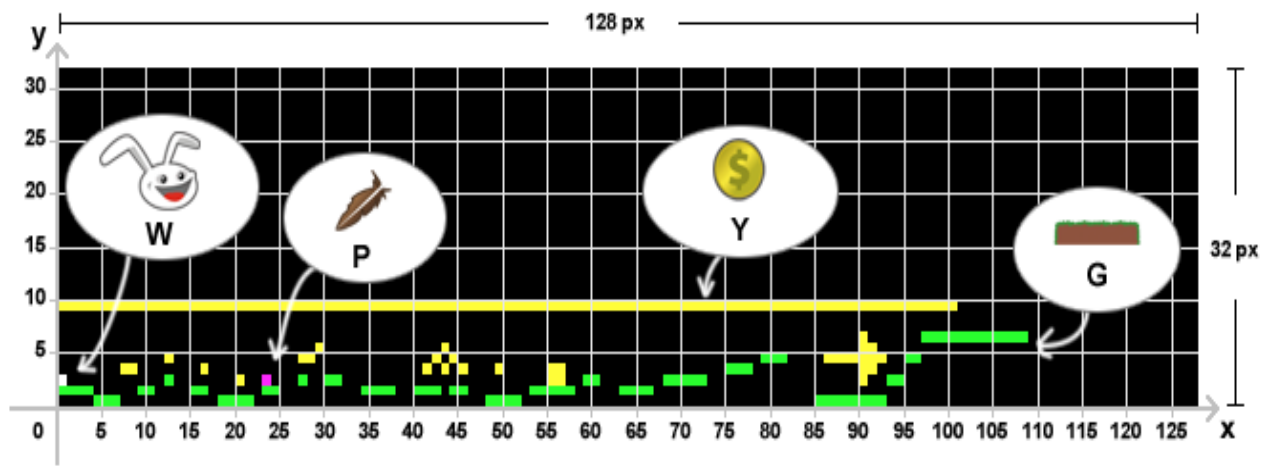
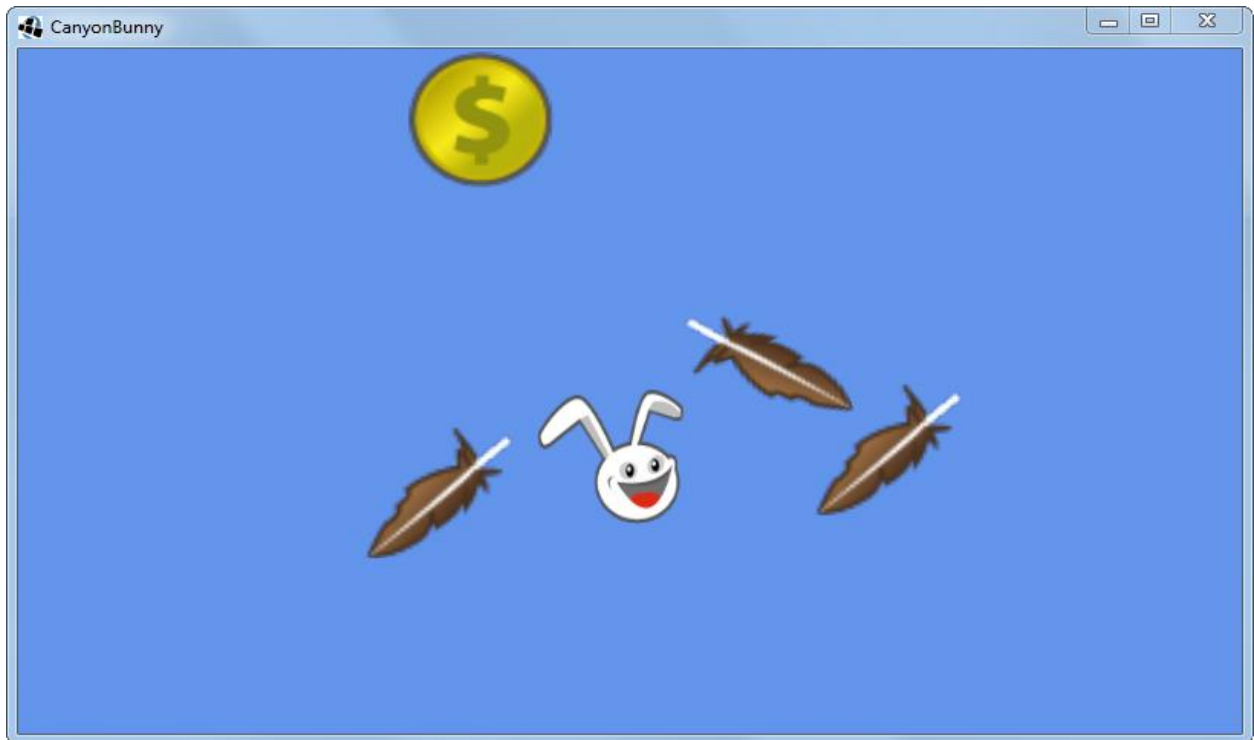
- data
 - Default-568h@2x.png
 - Default.png
 - Default@2x.png
 - Default@2x~ipad.png
 - Default~ipad.png
 - Icon-72.png
 - Icon-72@2x.png
 - Icon.png
 - Icon@2x.png



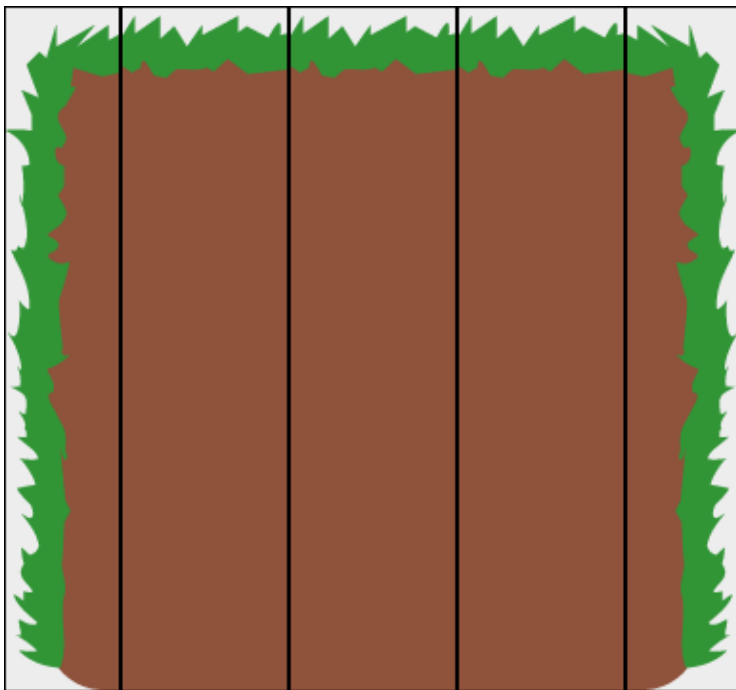
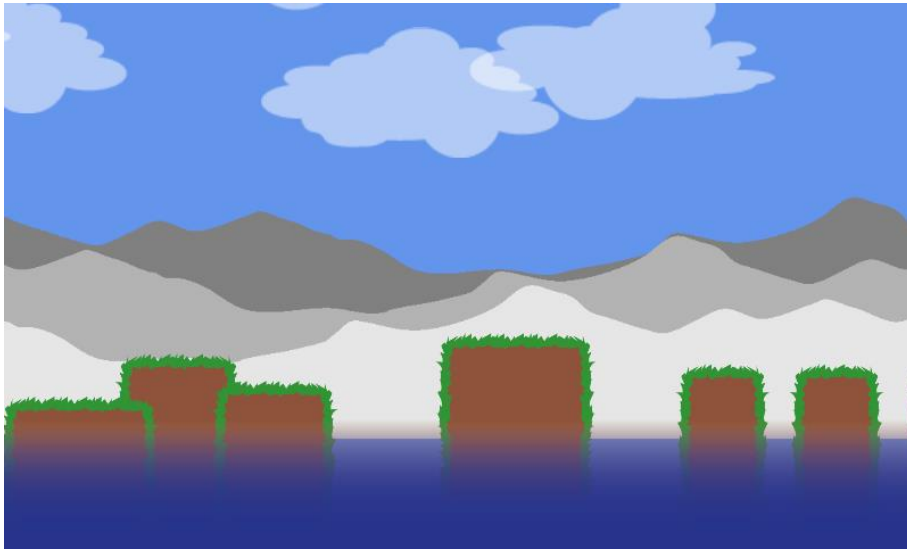


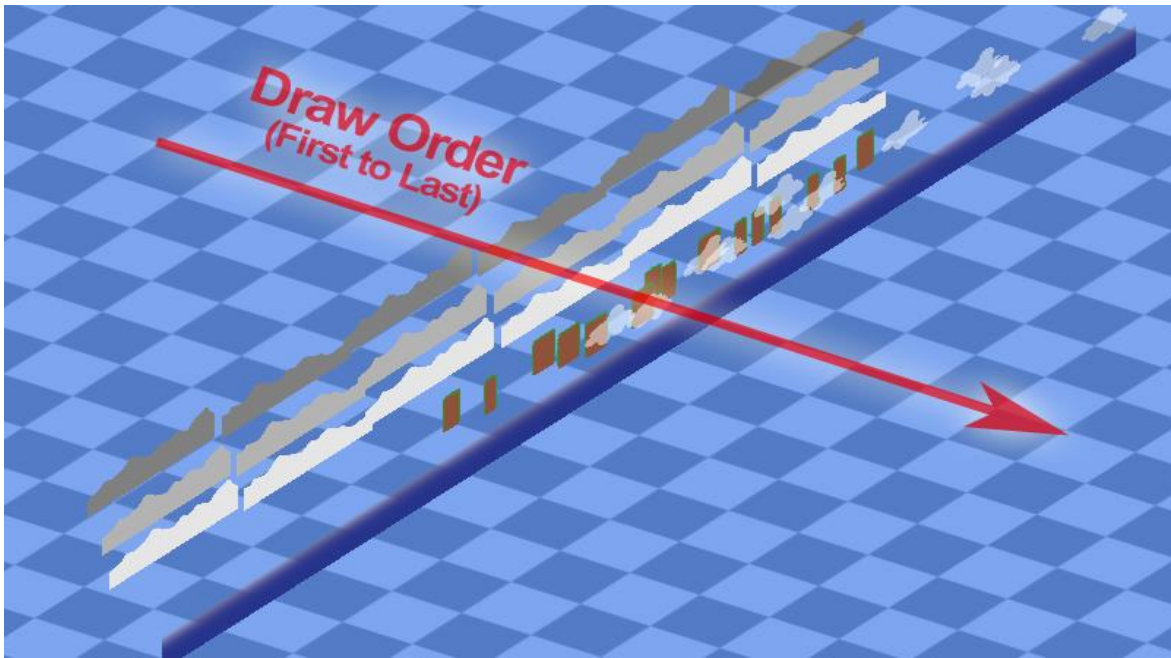
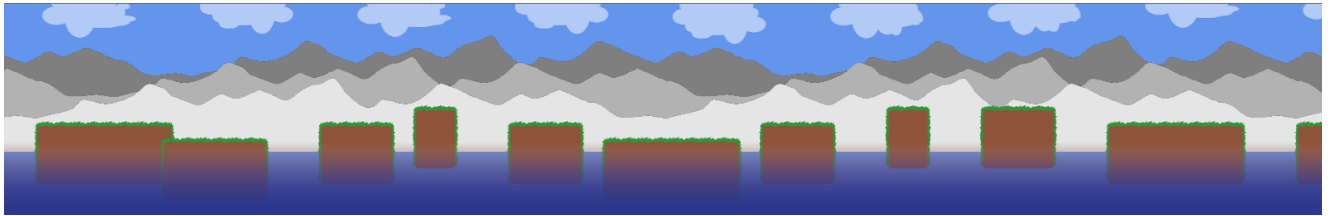
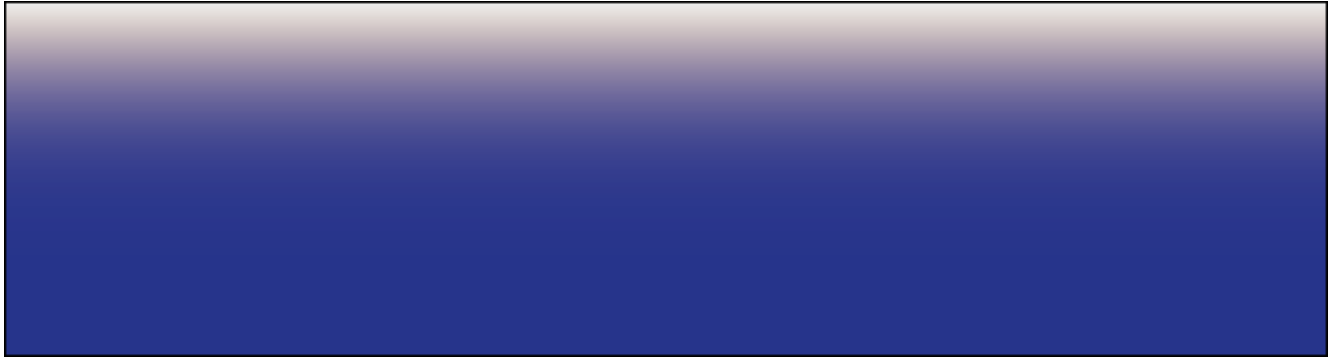




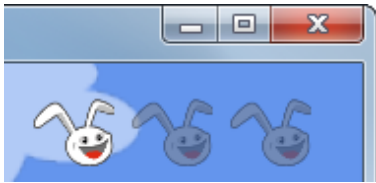
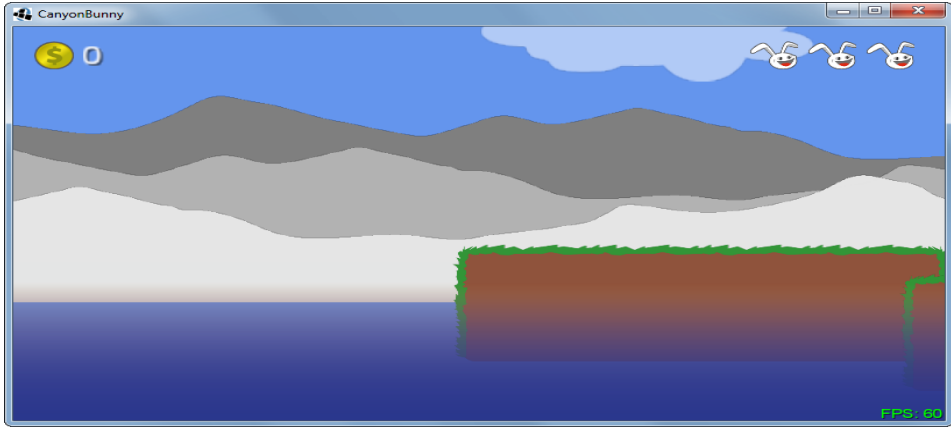


5 Making a Scene





```
Ç#@ÅÄÅÖÖÖÖÖÅÅYUUNUUEY  
ÉÉÉ$P{||}()||||||A9ØQ?WÆ%MOI  
VAØRXYCDG#KNPSTHZP&BUBI  
ó#035689?EF94Y&kúúúúóPóóéI  
ñáL7óPé&2hédábááJf/r|||!øéáóó  
f;WæmV+<>osúúacénZXR:ª=^~|||_
```

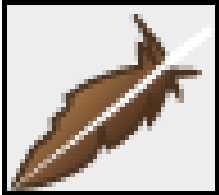


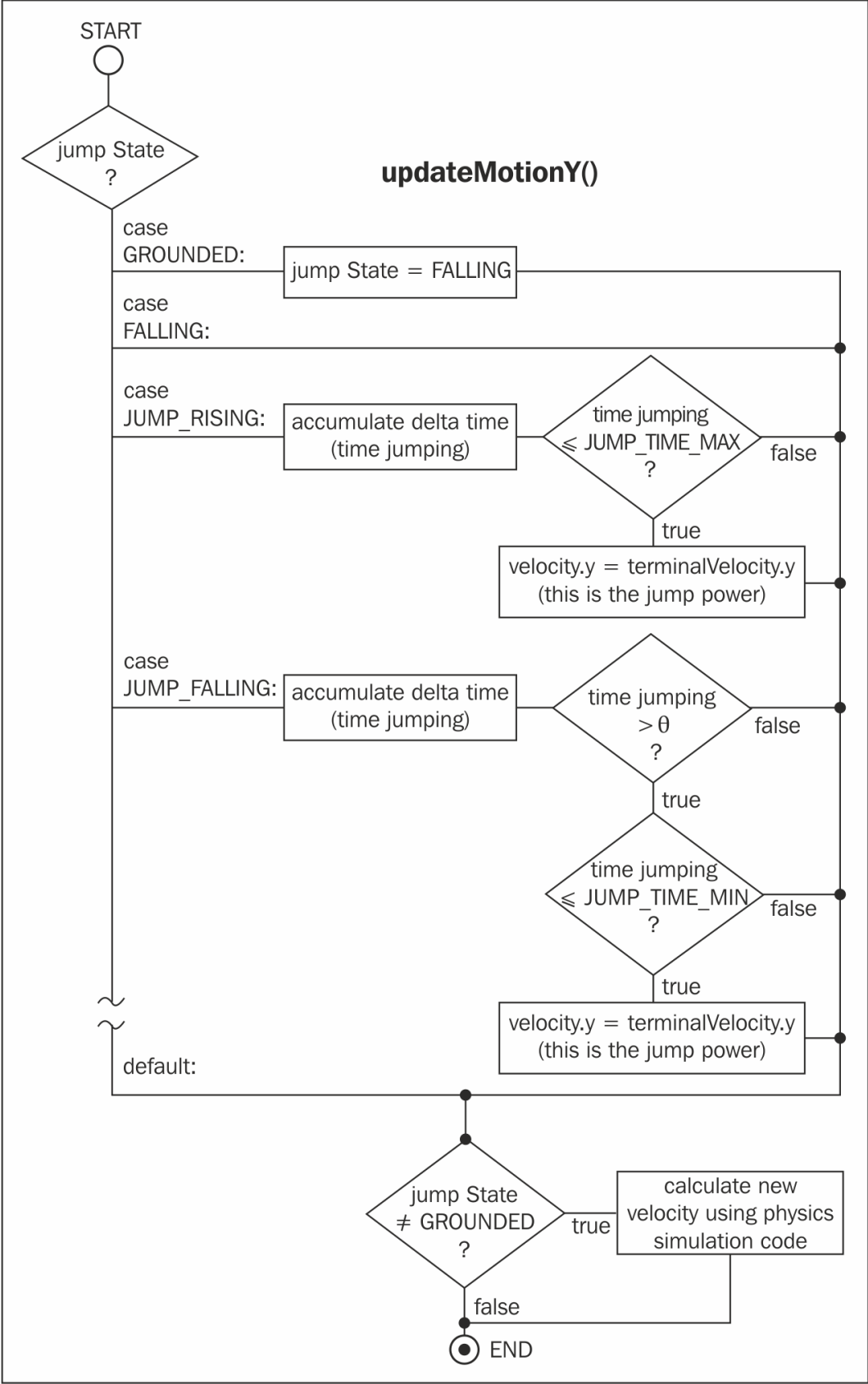
≥ 45

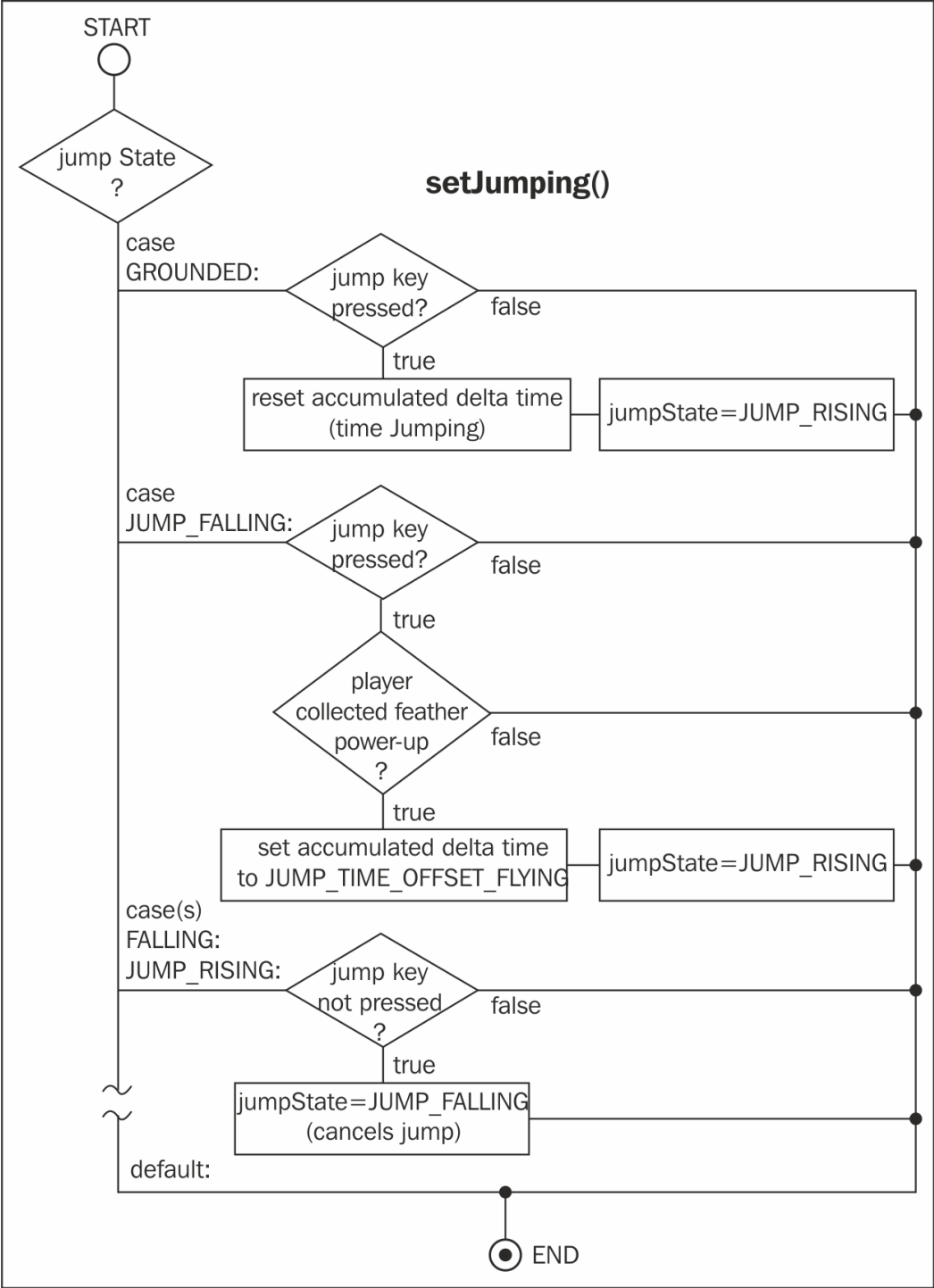
≥ 30

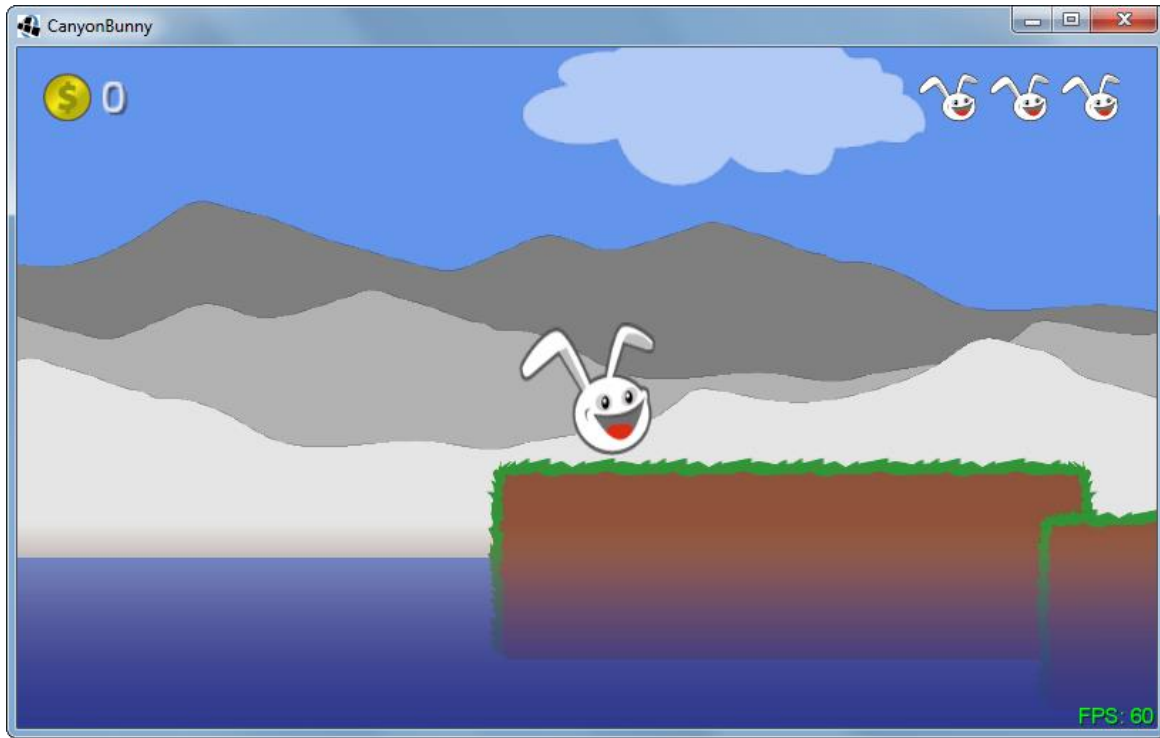
< 30

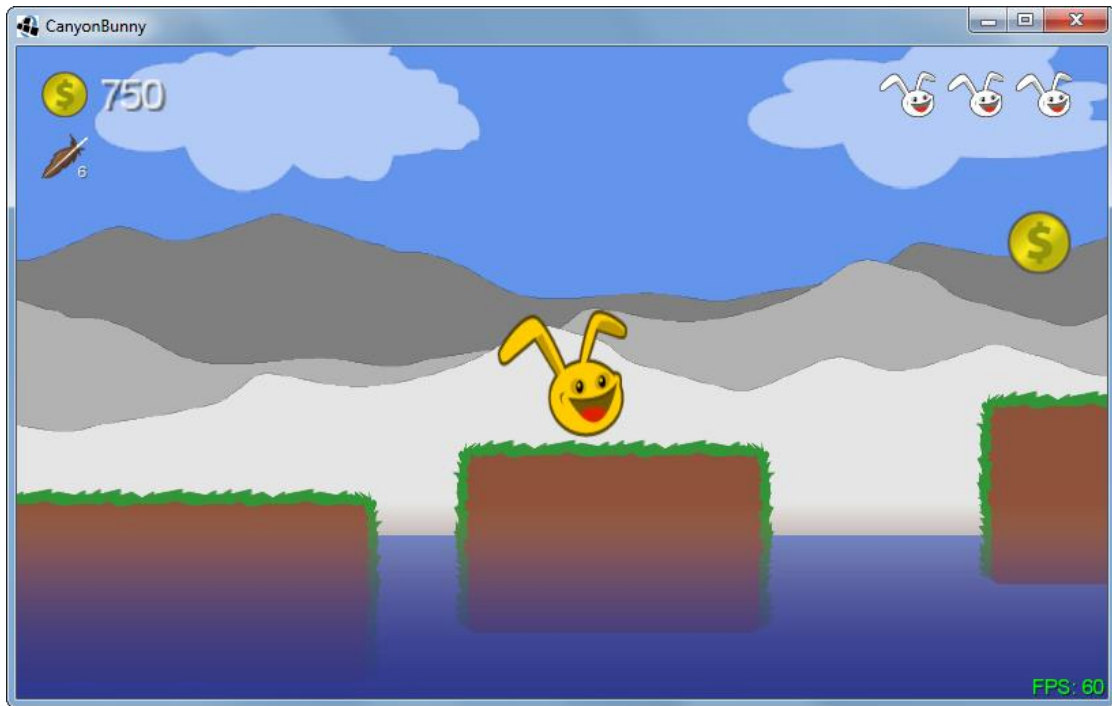
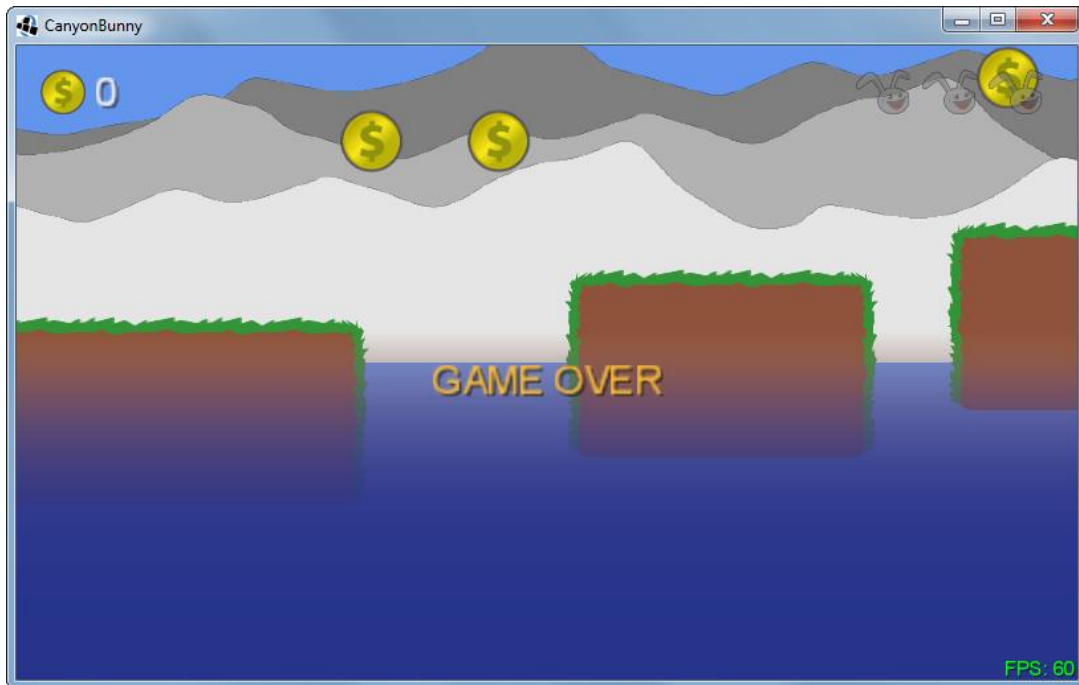
6 Adding the Actors



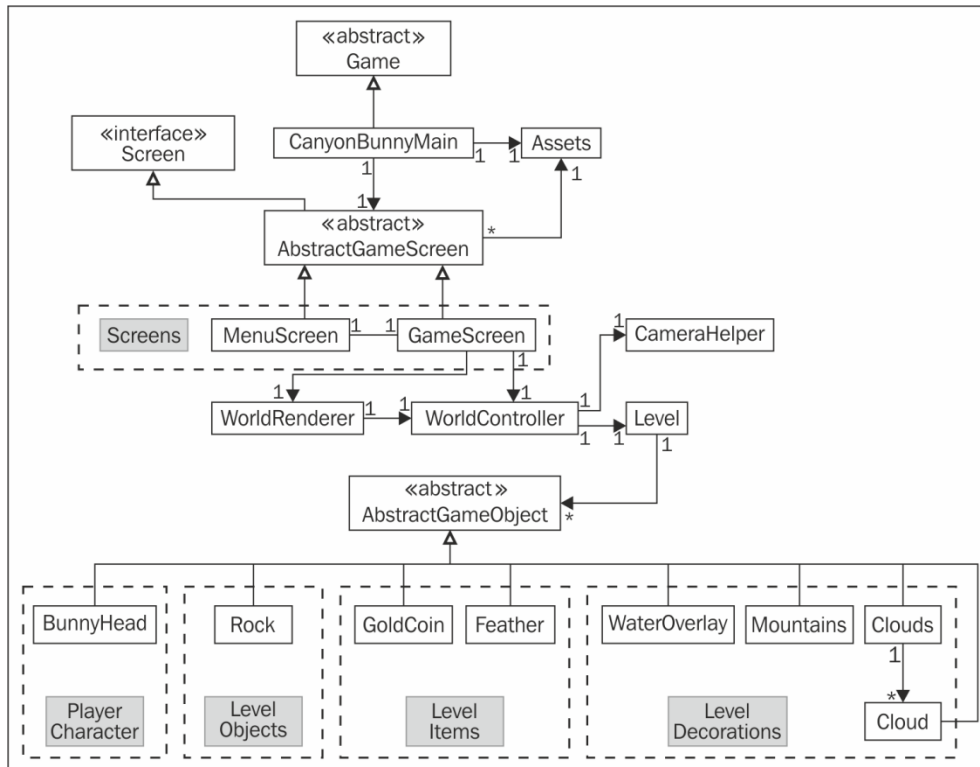


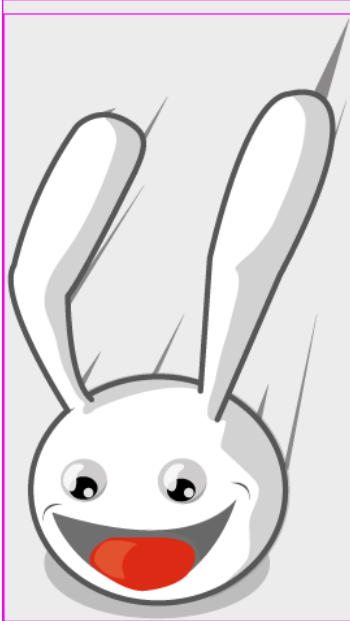






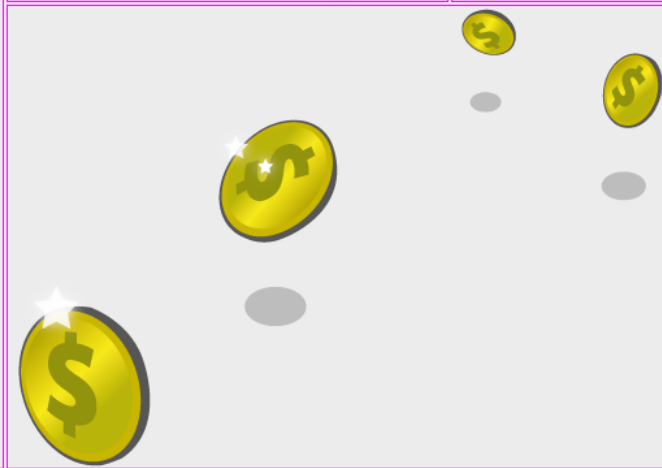
7 Menus and Options

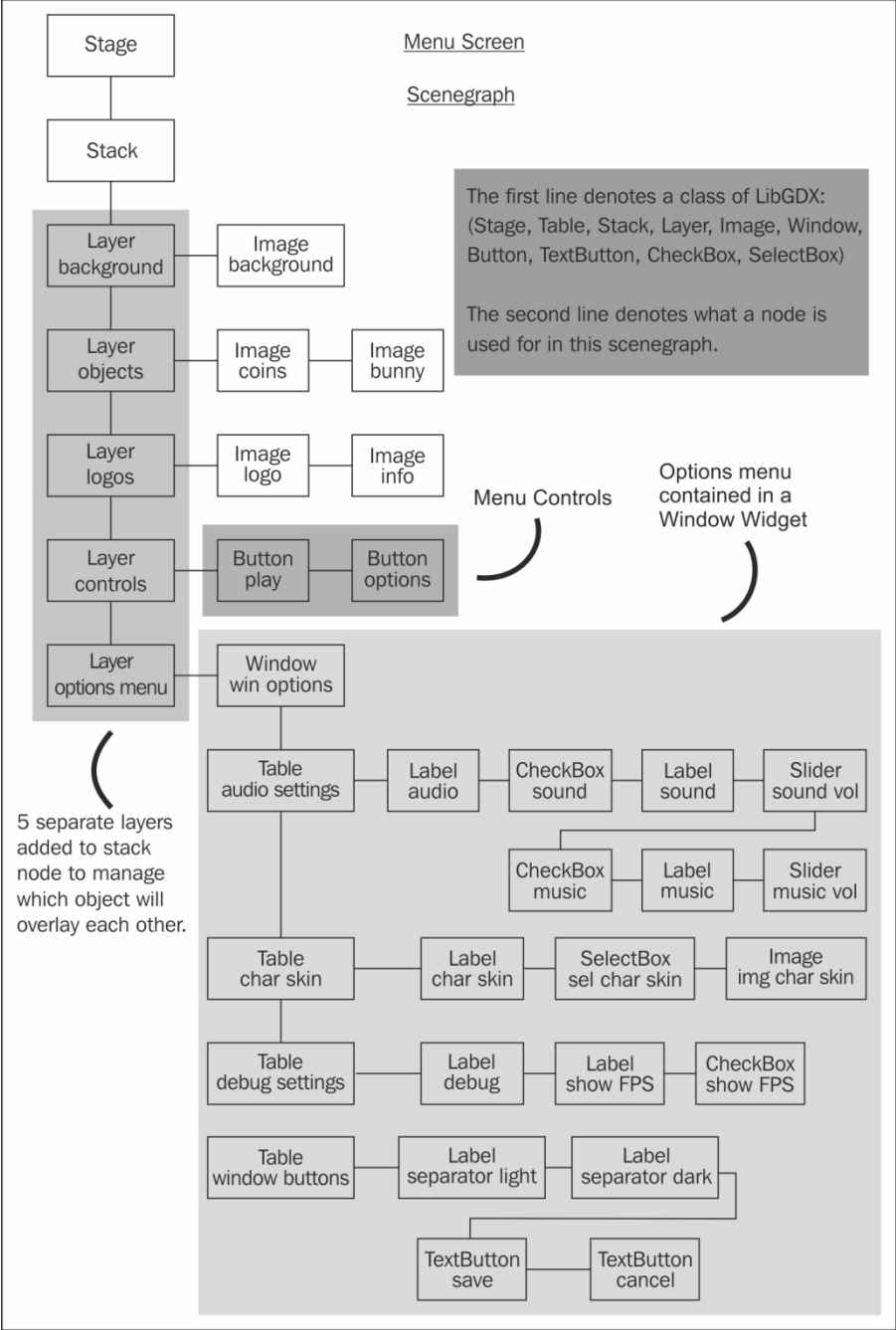


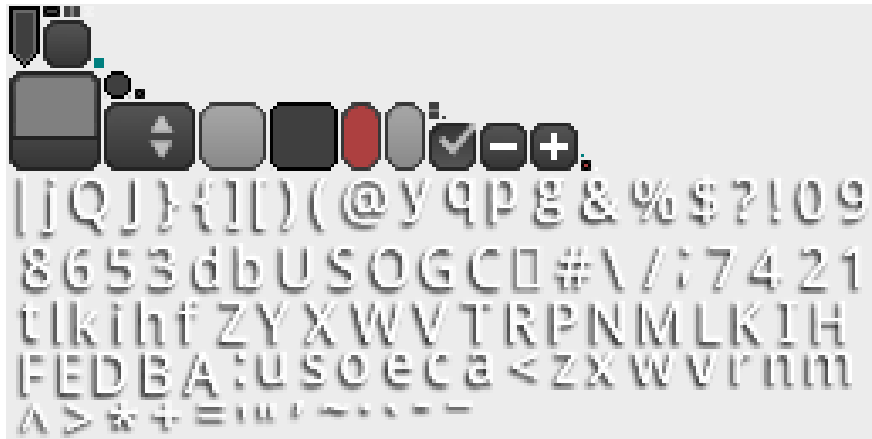


CANYON BUNNO

© 2013 by **GAMERALD** powered by **libGDX**

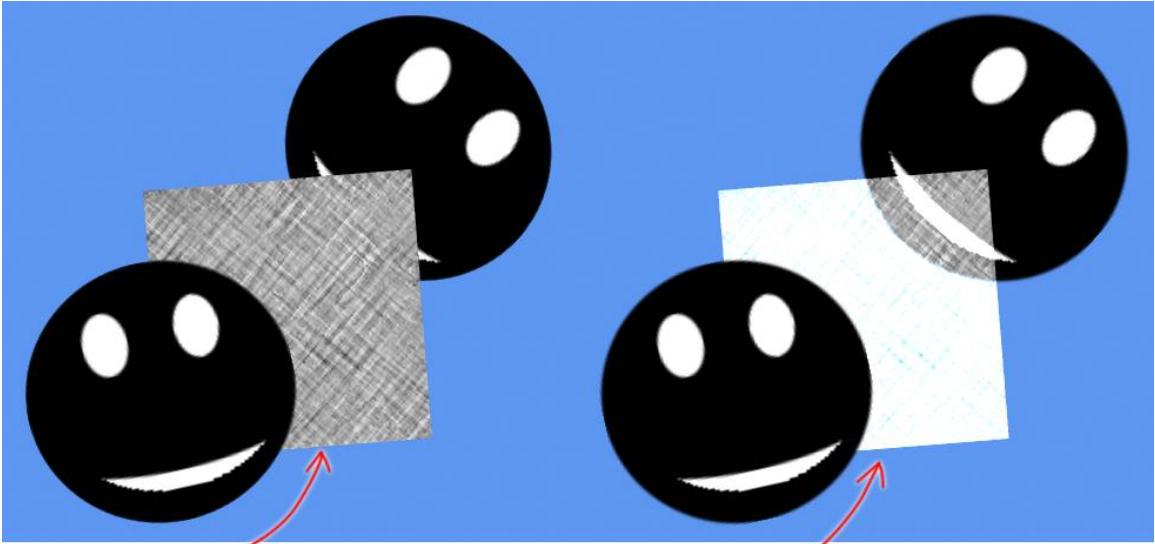








8 Special Effects




Normal Blending Mode

Additive Blending Mode

Particle Editor

FPS: 61
Count: 175
Max: 200
32%



Editor Properties

Pixels per meter
Value: 1

Zoom level
Value: 1

Emitter Properties


Image
Open

Count Min number of particles at all times, max number of particles allowed.
Min: 0 Max: 200


Delay Active

Duration Time particles will be emitted, in milliseconds.
Value: 3,000

Emission Number of particles emitted per second.
High: 250 Low: 0 Relative



Life Time particles will live, in milliseconds.
High: 500 Low: 0 Relative




Life Offset Active

X Offset Active

Y Offset Active

Spawn Shape used to spawn particles.
Shape: point

Size Particle size, in world units.
High: 32 Low: 0 Relative



Effect Emitters

Emitter	
Untitled	<input checked="" type="checkbox"/>

New
Delete
Save
Open
Up
Down

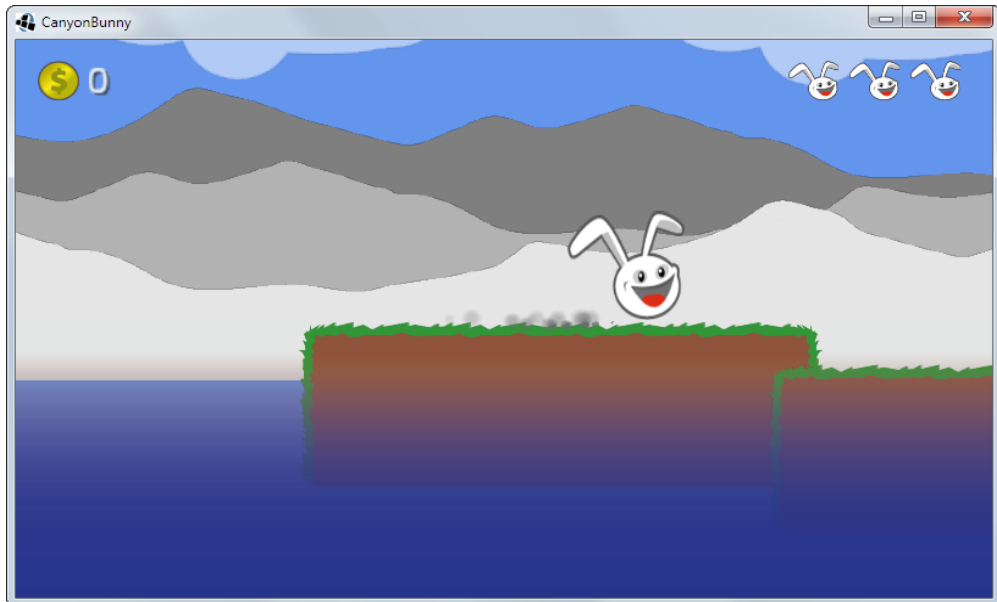
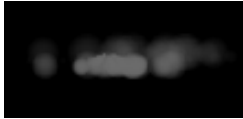
Duration Time particles will be emitted, in milliseconds.
 Value:

Emission Number of particles emitted per second.

Percentage	Emission Percentage
0%	100%
20%	35.3%
30%	84.8%
45%	38.2%
58.8%	58.8%

Life Time particles will live, in milliseconds.
 High: Relative
 Low: +

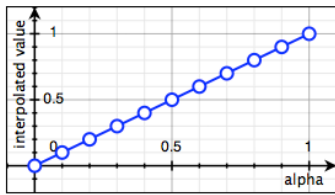
Life Offset



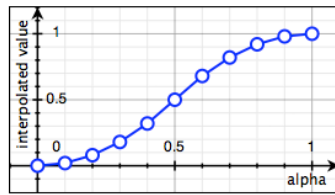


CanyonBunny	\$ 91
CanyonBunny	\$ 107
CanyonBunny	\$ 253
CanyonBunny	\$ 300
CanyonBunny	\$ 728

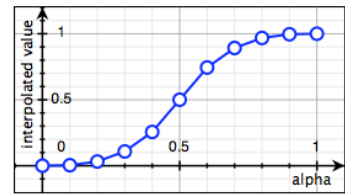
9 Screen Transitions



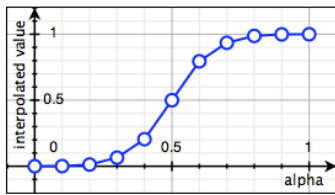
linear



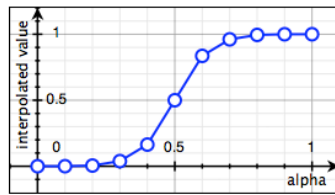
pow2



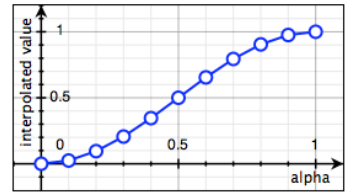
pow3



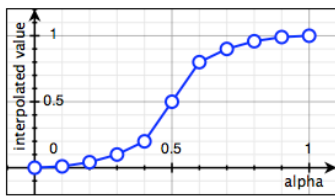
pow4



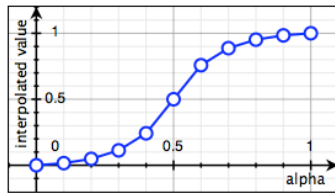
pow5



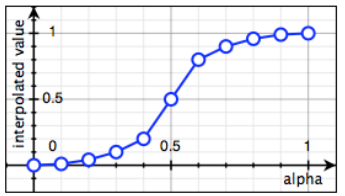
sine



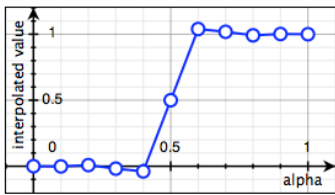
circle



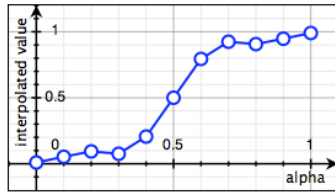
exp5



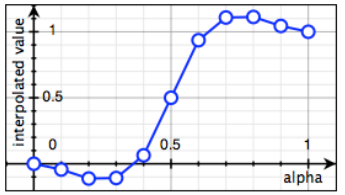
exp10



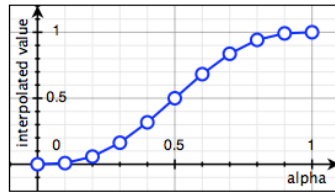
elastic



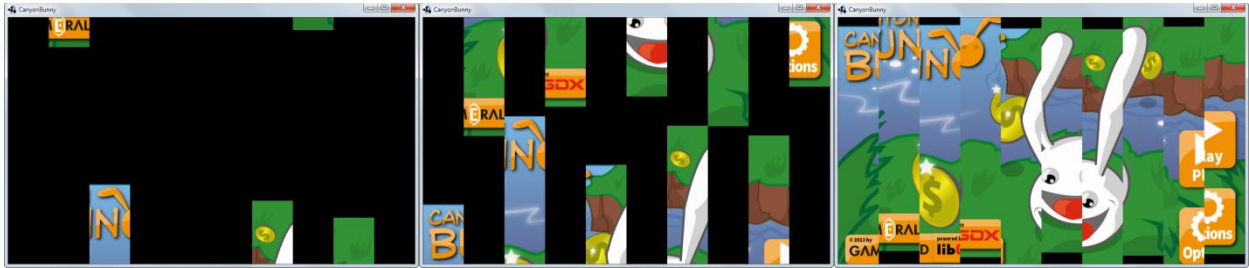
bounce



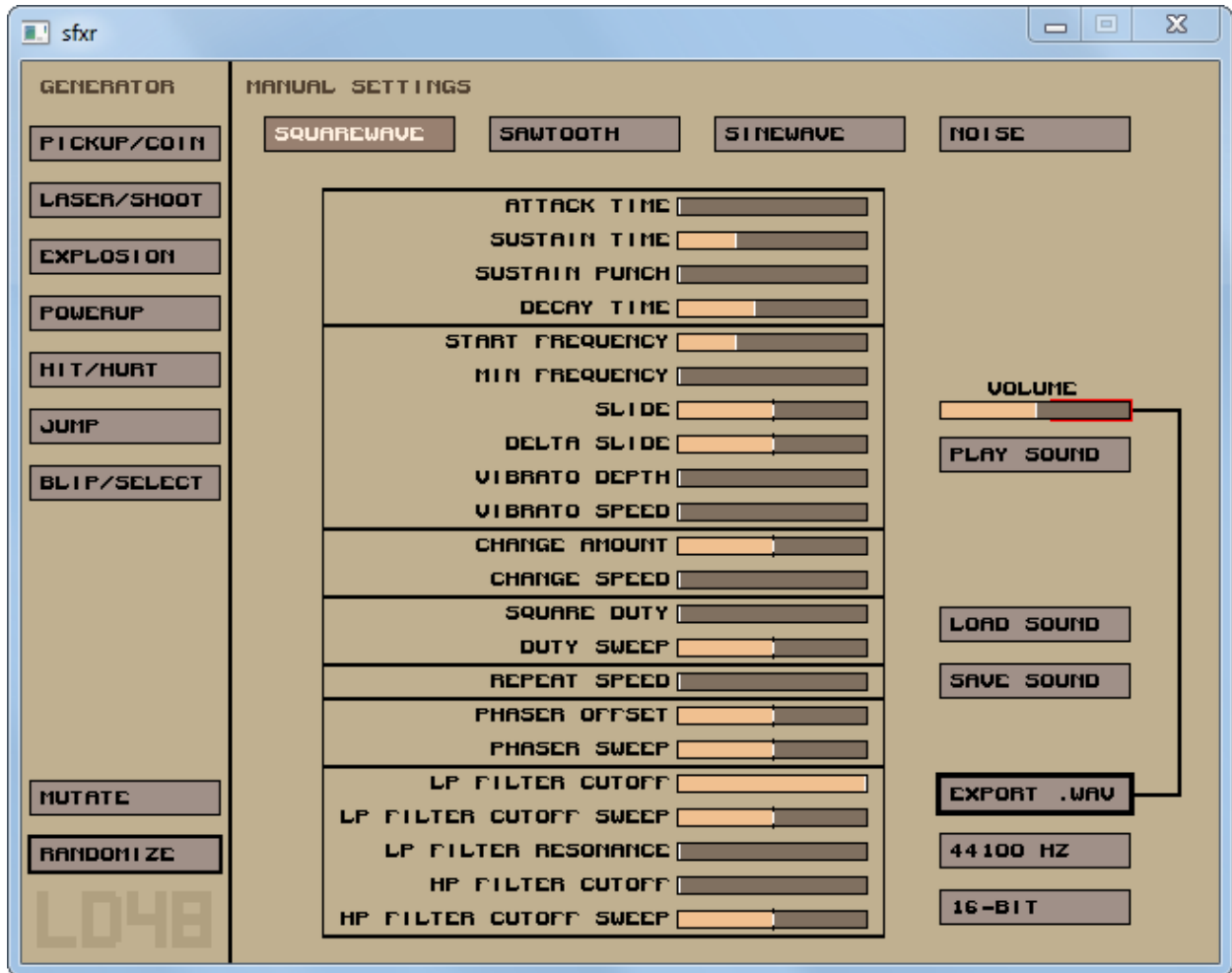
swing



fade



10 Managing the Music and Sound Effects



Untitled

Pickup/coin
Laser/shoot
Explosion
Powerup
Hit/hurt
Jump
Blip/select
Random

#	Name	☆☆☆
1	Empty	

Square Sawtooth Sine Noise

Attack time
Sustain time
Sustain punch
Decay time

Start frequency
Min frequency cutoff
Slide
Delta slide
Vibrato depth
Vibrato speed

Change amount
Change speed

Square duty
Duty sweep

Repeat speed

Phaser offset
Phaser sweep

Low-pass filter cutoff
Low-pass filter cutoff sweep
Low-pass filter resonance
High-pass filter cutoff
High-pass filter cutoff sweep

Play on change
Play
Play looping
Playback Volume
Export...
Export Quickly
Sample Volume
44100 Hz
16-bit

The screenshot displays the Bfxr software interface, which is used for creating and editing sound effects. The interface is divided into several sections:

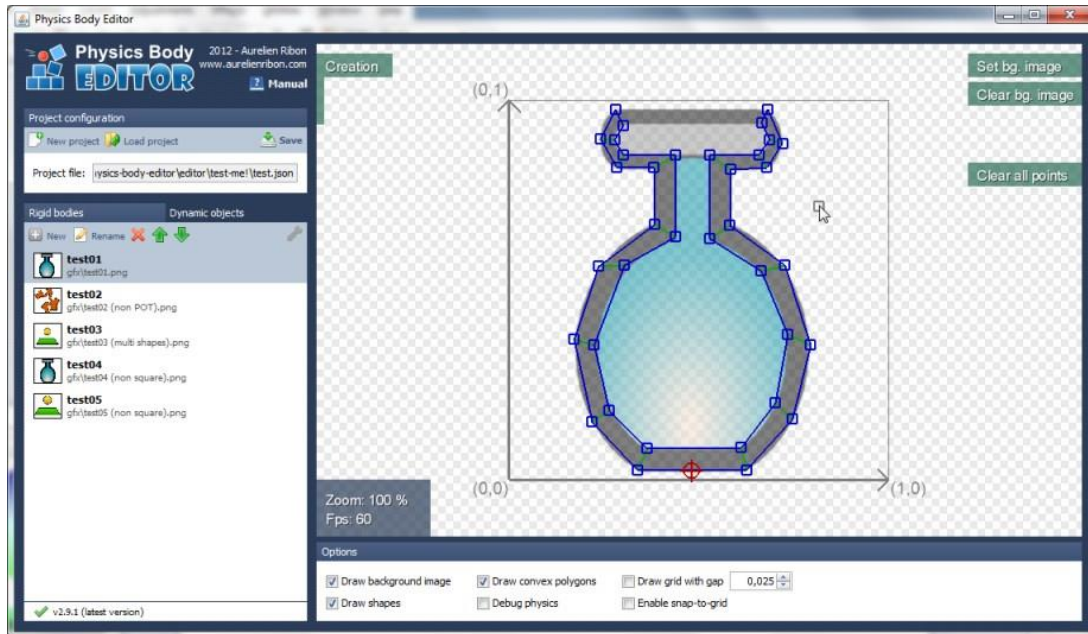
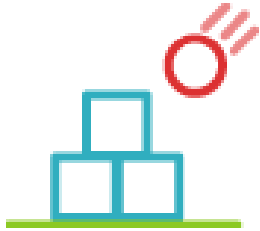
- Sound List:** A vertical list of sound effects including Pickup/Coin, Laser/Shoot, Explosion, Powerup, Hit/Hurt, Jump, Blip/Select, Randomize, Mutation, and a checked 'Create New Sound' option. Below this are buttons for 'Apply Synth', 'Revert Synth', and 'Duplicate Synth'. A list of sounds is shown with 'X' marks: Jump, Blip_Select, and Jump2.
- Synth/Mixer:** A central panel with two tabs: 'Synth' and 'Mixer'. The 'Synth' tab is active, showing a grid of waveforms: Triangle, Sin, Square, Saw, Breaker, Tan, Whistle, White, and Pink. Below this are numerous sliders for parameters such as Attack Time, Sustain Time, Punch, Decay Time, Compression, Frequency, Frequency Cutoff, Frequency Slide, Delta Slide, Vibrato Depth, Vibrato Speed, Harmonics, Harmonics Falloff, Pitch Jump Repeat Speed, Pitch Jump Amount 1, Pitch Jump Onset 1, Pitch Jump Amount 2, Pitch Jump Onset 2, Square Duty, Duty Sweep, Repeat Speed, Flanger Offset, Flanger Sweep, and Low-pass Filter Cutoff.
- Right Panel:** Contains a 'Play On Change' checkbox, a 'Play' button, a 'Master Volume' slider, and buttons for 'Export Wav', 'Load from Disk', 'Save to Disk', 'Copy', 'Paste', 'Copy Link', and 'About'.

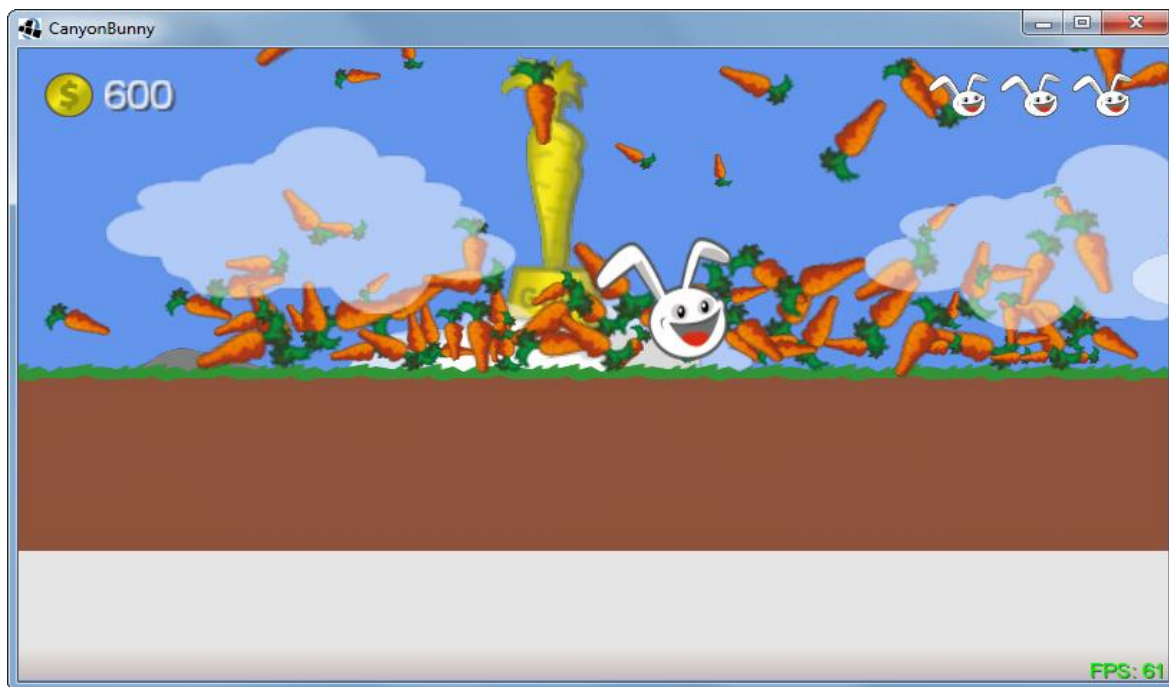
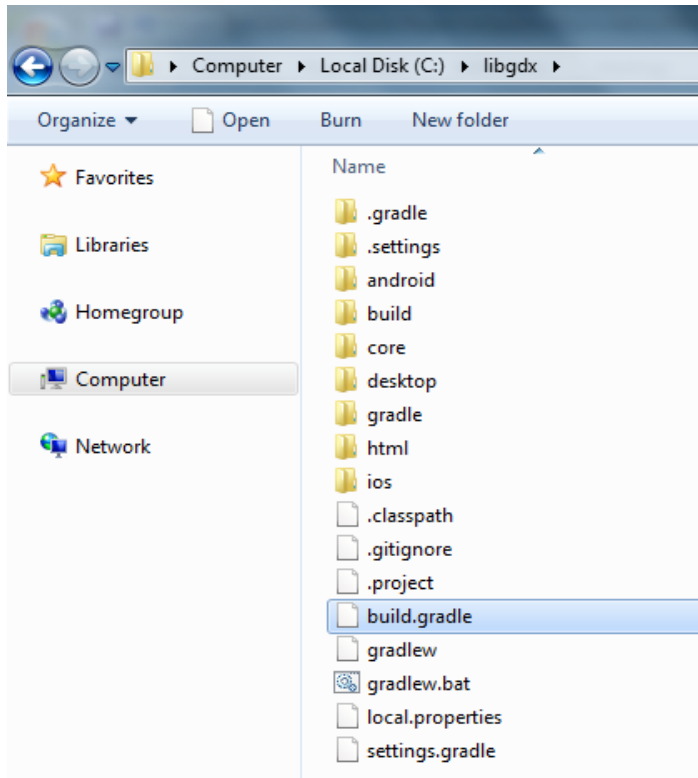
At the bottom of the interface, there is a link: [Download Bfxr Standalone](#) (You'll need to install [Adobe AIR](#) first)

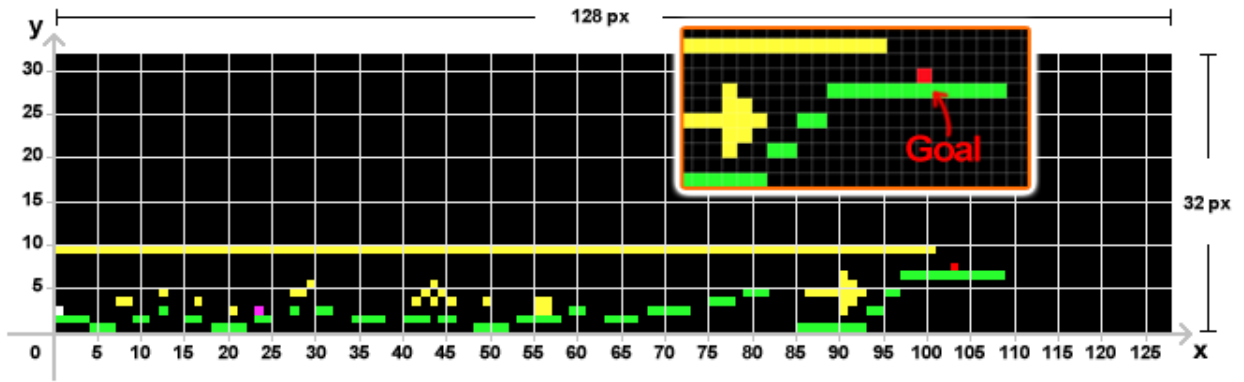
- ▲ CanyonBunny-android
 - ▶ src
 - ▶ gen [Generated Java Files]
 - ▶ Android Dependencies
 - ▶ Referenced Libraries
 - ▲ assets
 - ▶ images
 - ▶ levels
 - ▲ music
 - keith303_-_brand_new_highscore.mp3
 - ▶ particles
 - ▲ sounds
 - jump_with_feather.wav
 - jump.wav
 - live_lost.wav
 - pickup_coin.wav
 - pickup_feather.wav

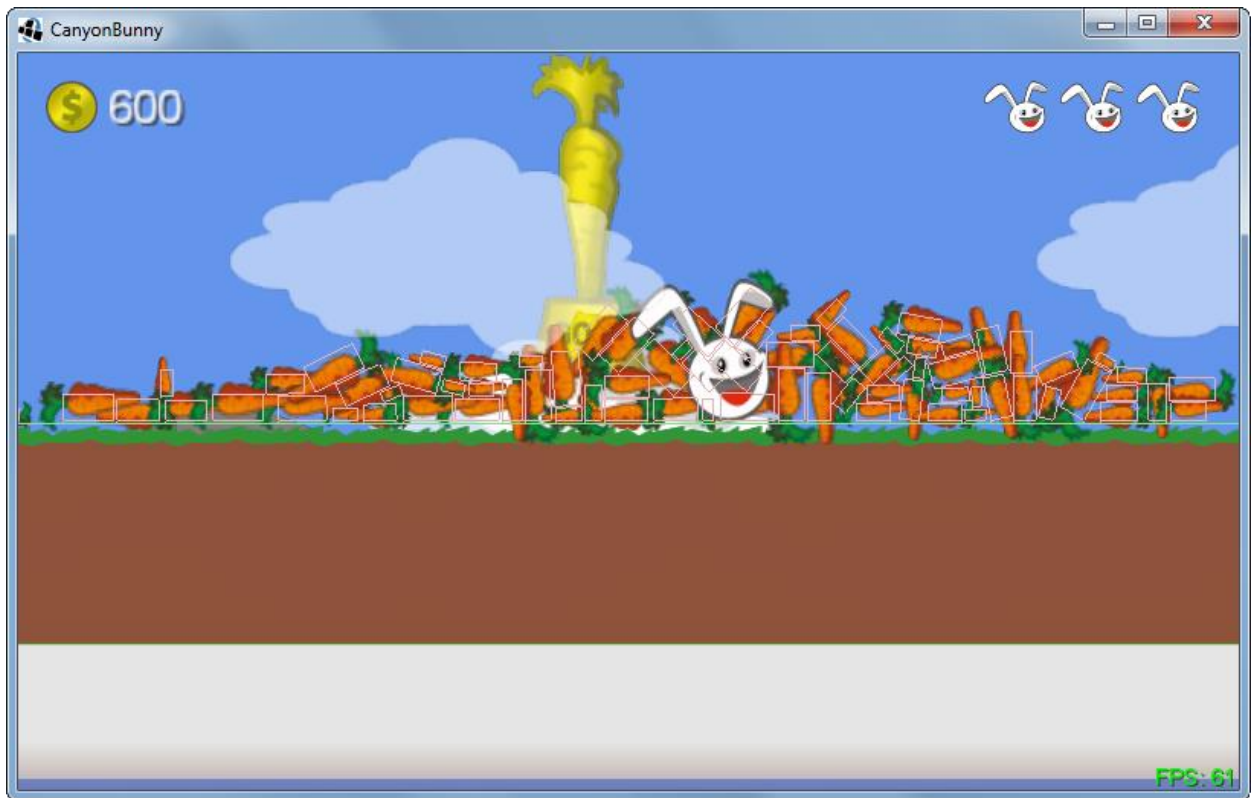
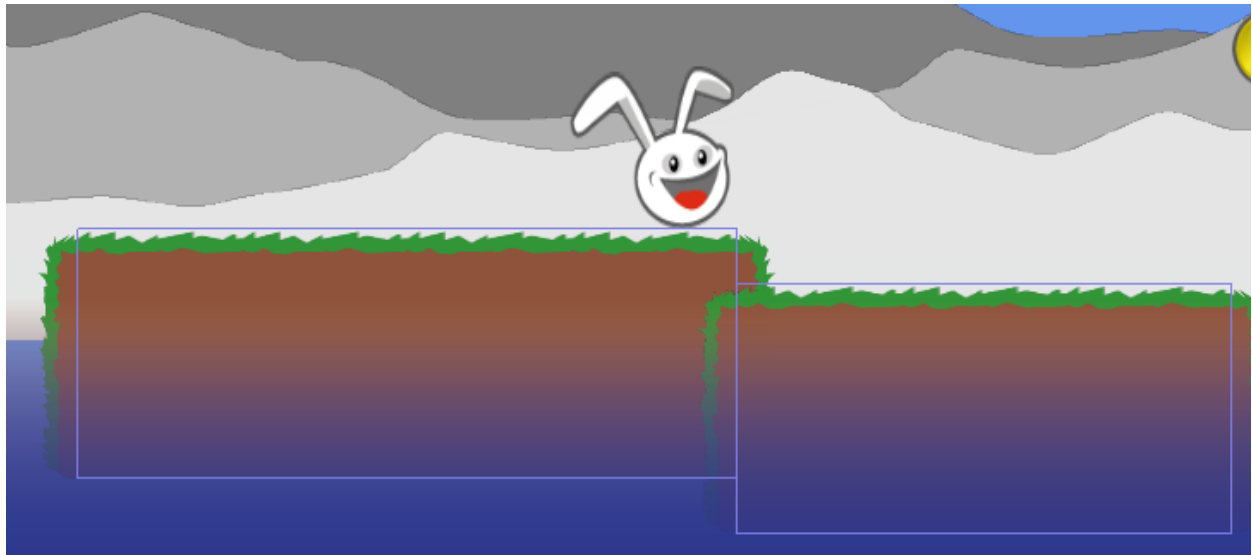


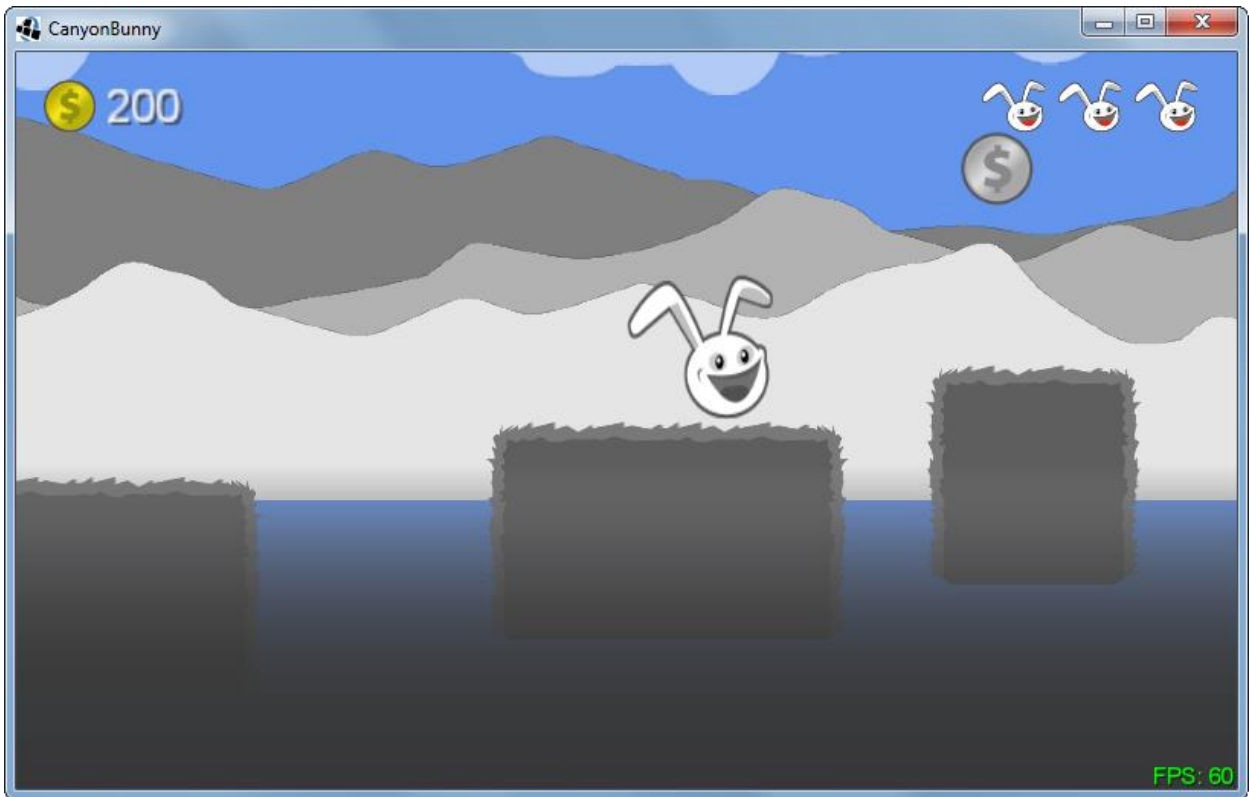
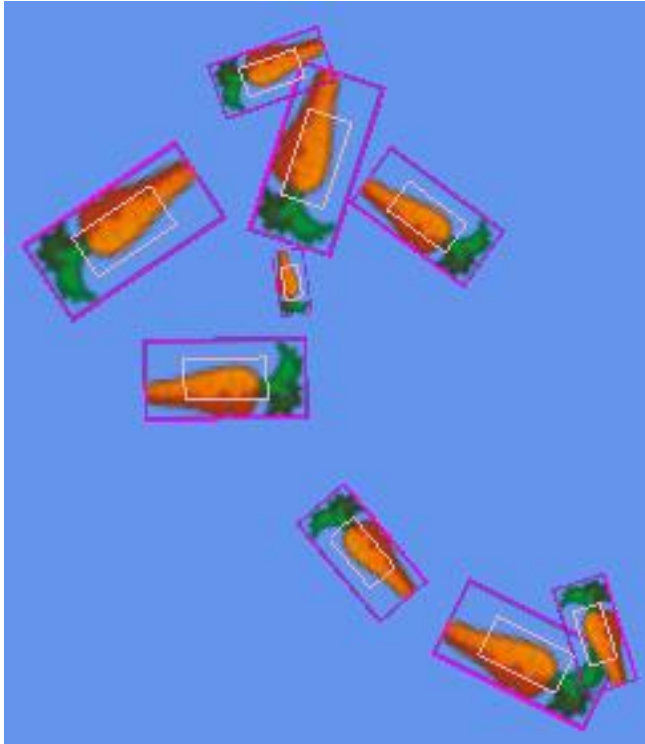
11 Advanced Programming Techniques

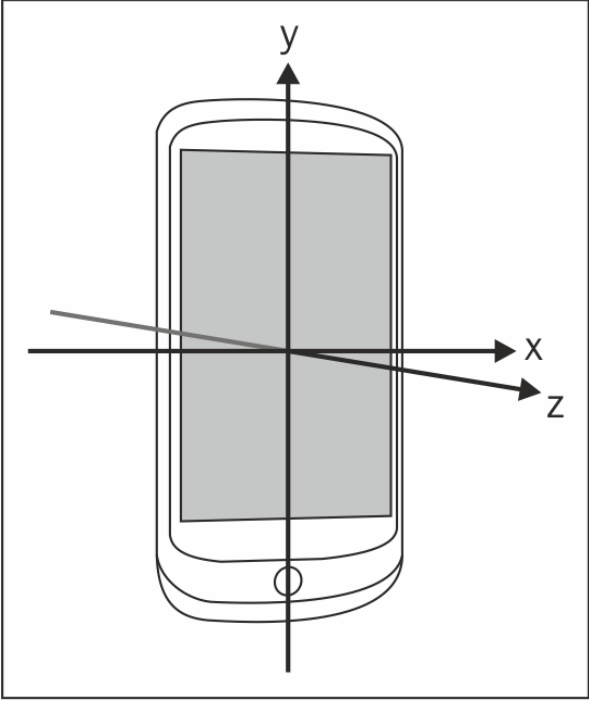




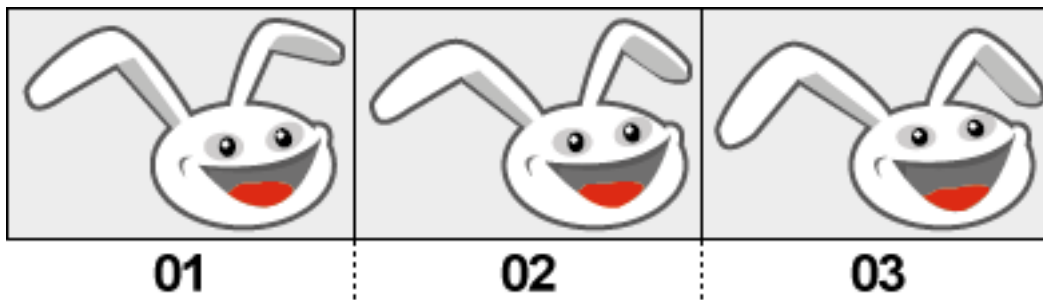


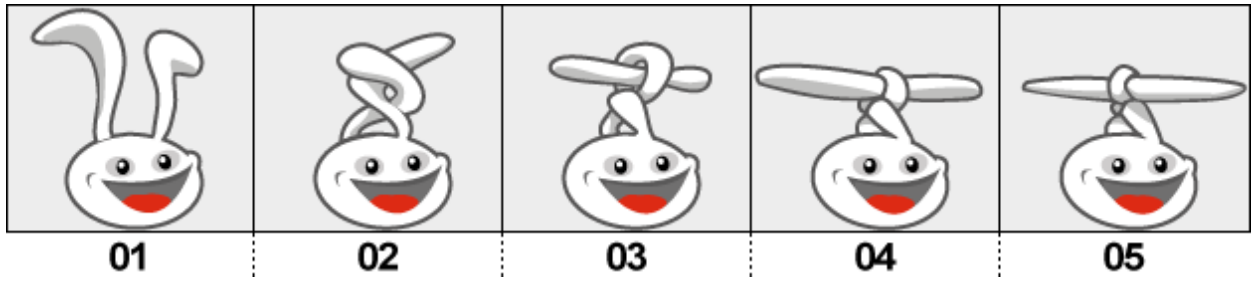


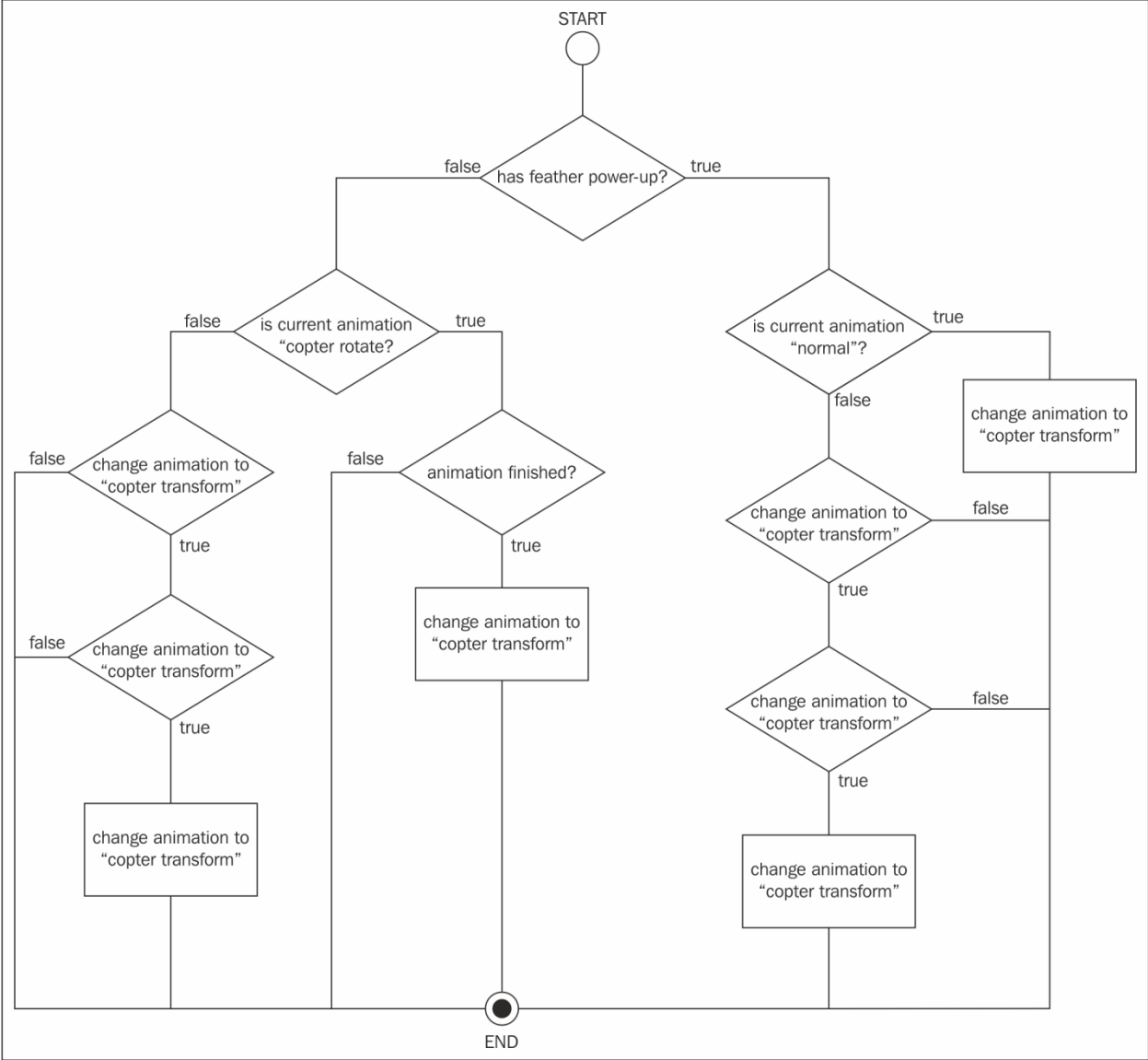




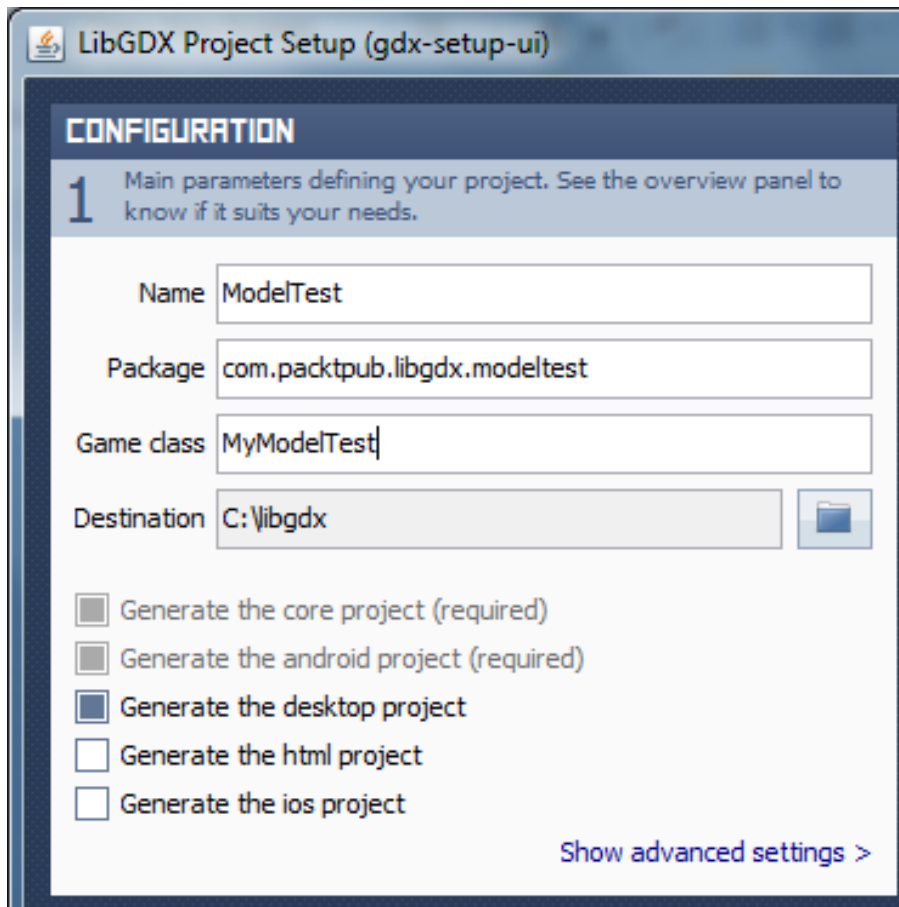
12 Animations







13 Basic 3D Programming



LibGDX Project Setup (gdx-setup-ui)


CONFIGURATION

1 Main parameters defining your project. See the overview panel to know if it suits your needs.

Name

Package

Game class

Destination 

Generate the core project (required)

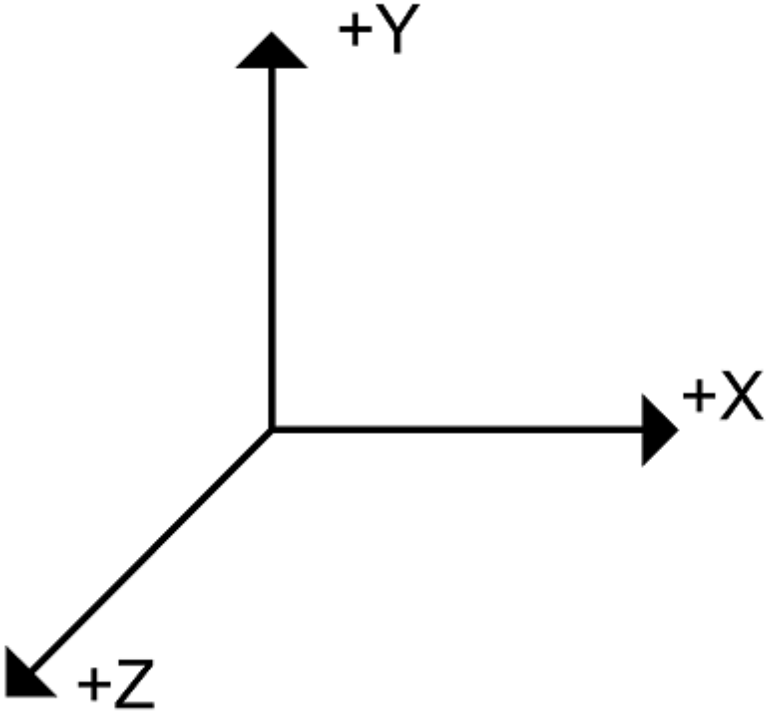
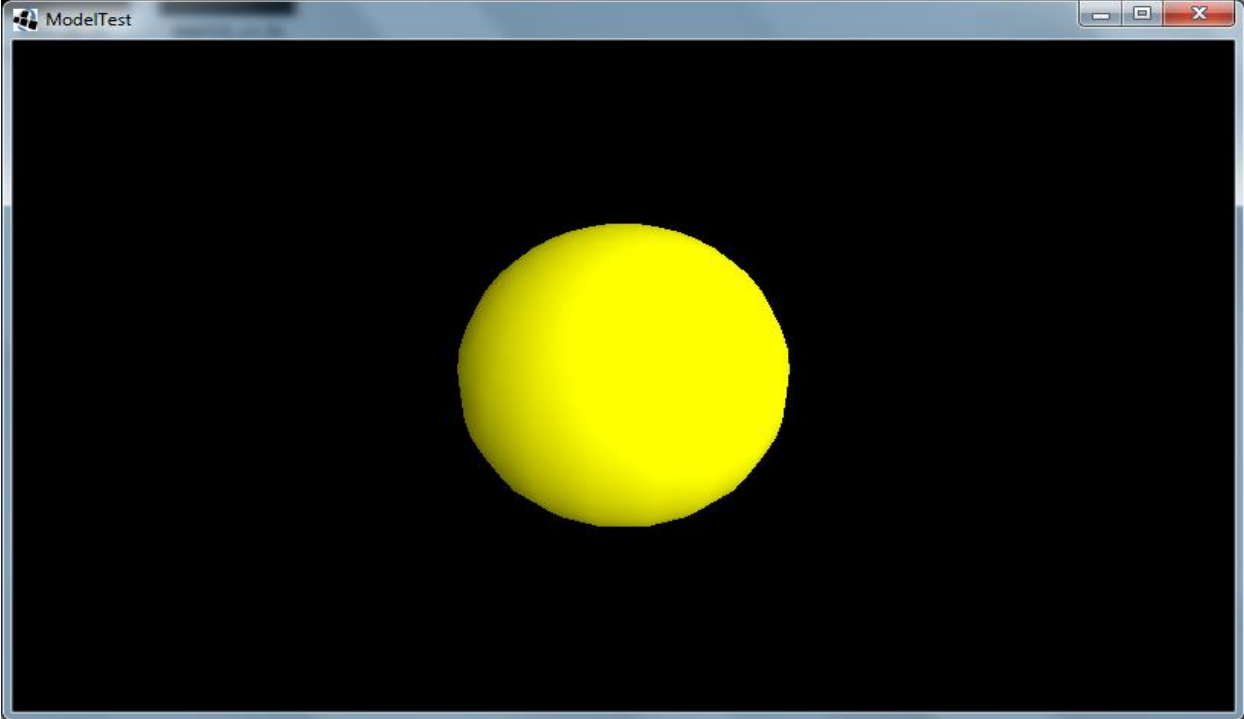
Generate the android project (required)

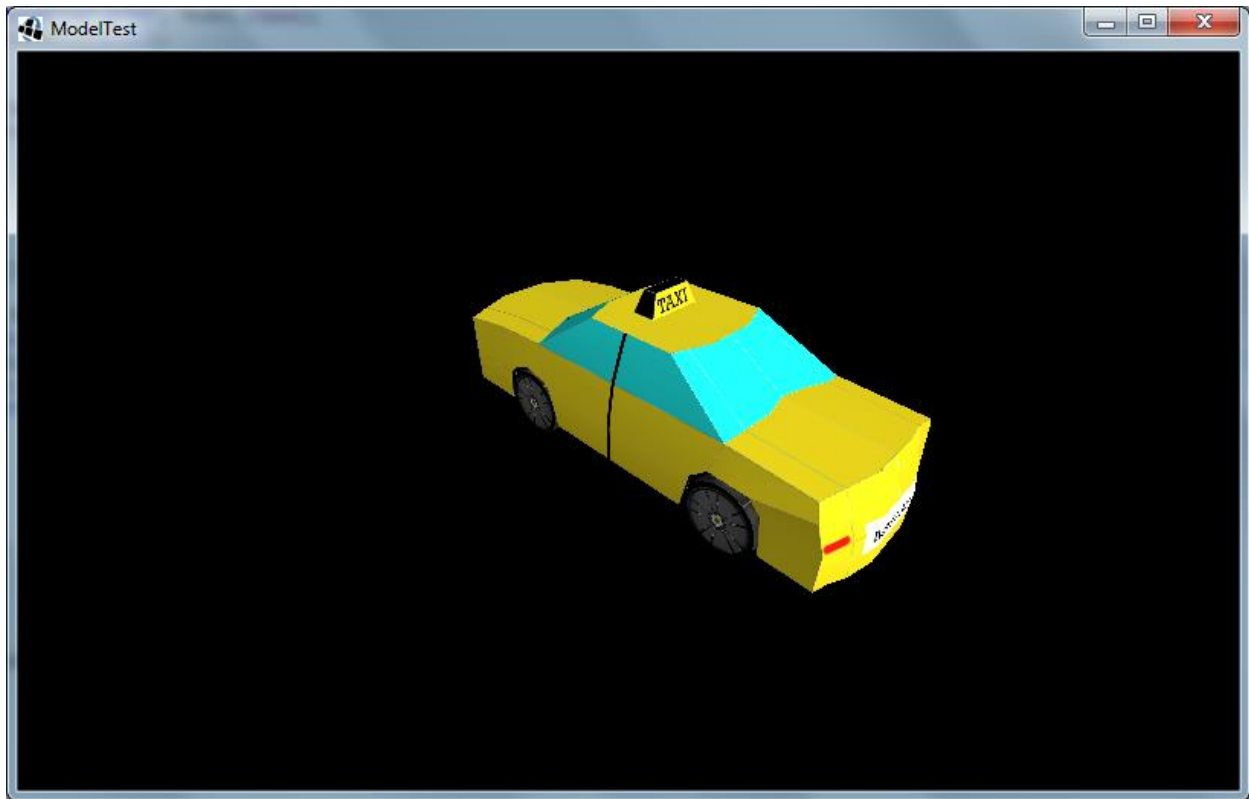
Generate the desktop project

Generate the html project

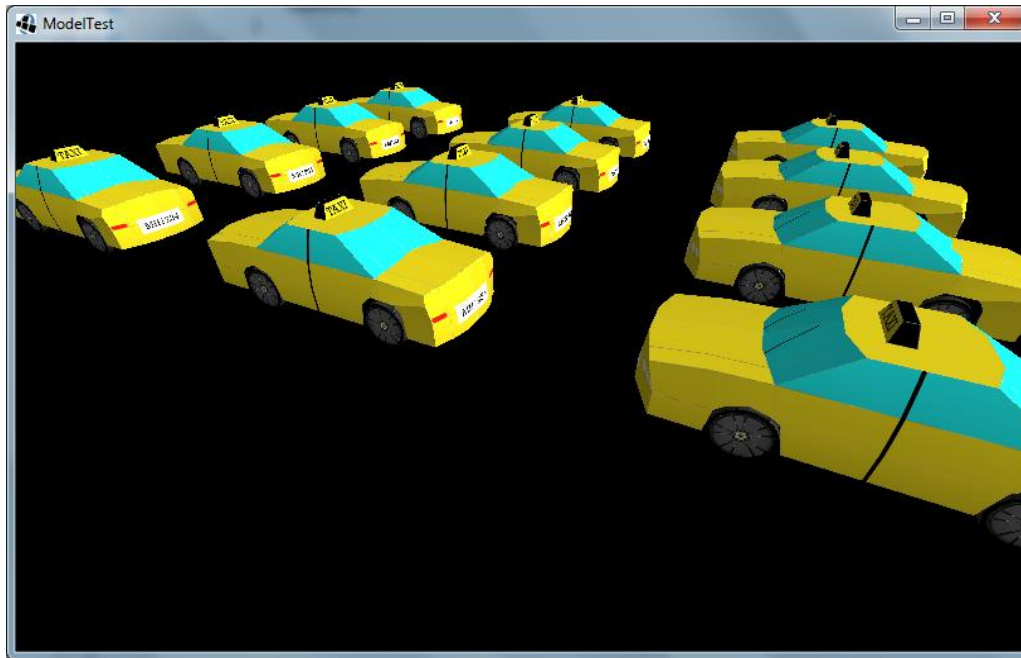
Generate the ios project


[Show advanced settings >](#)



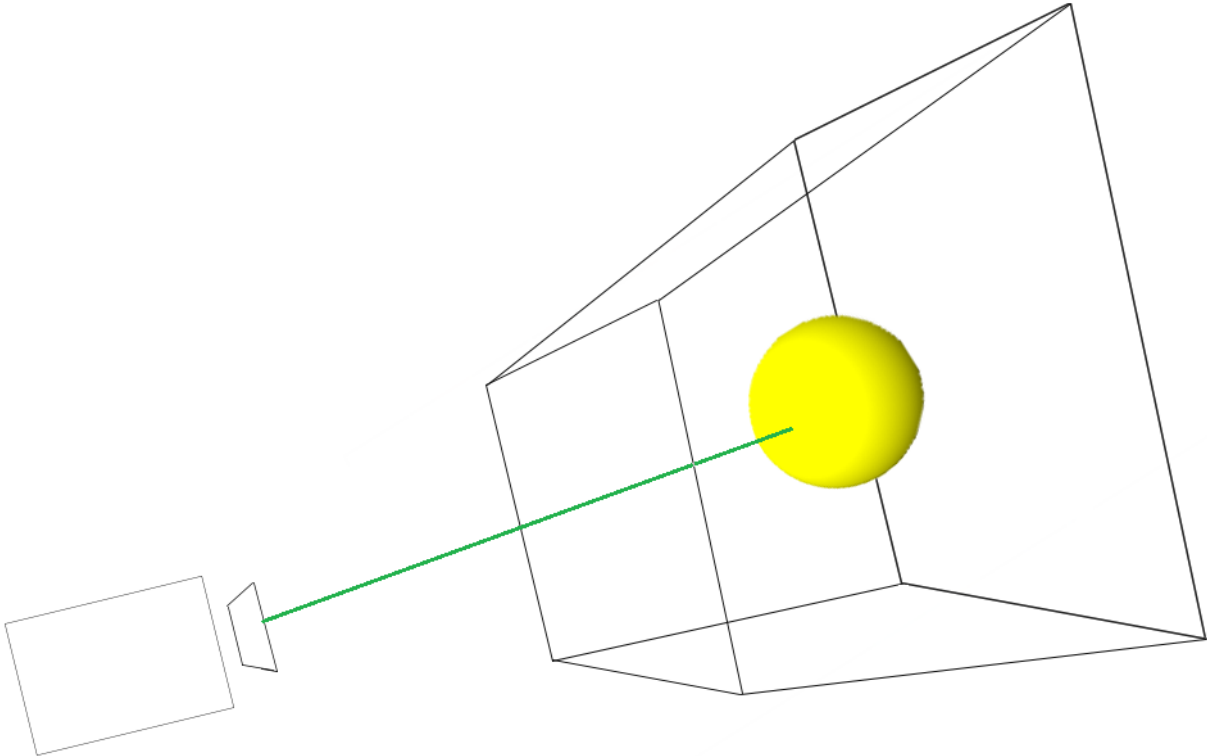
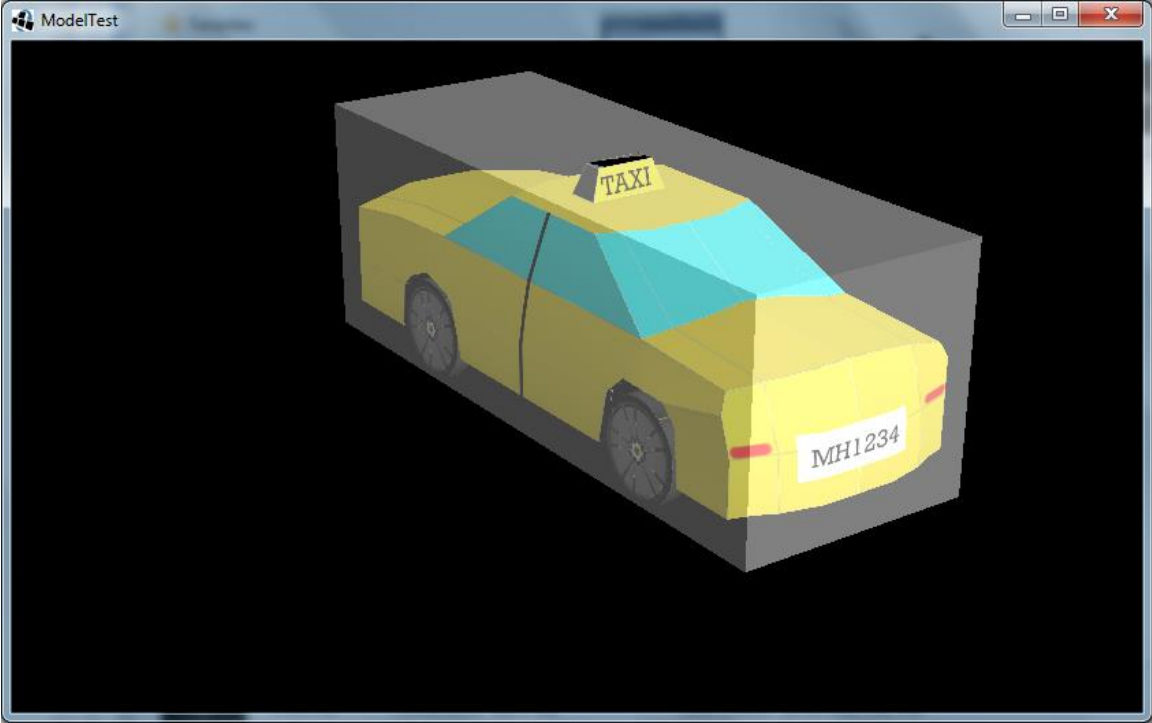


```
C:\Windows\system32\cmd.exe  
D:\>fbx-conv-win32.exe -o g3db -f car.fbx
```

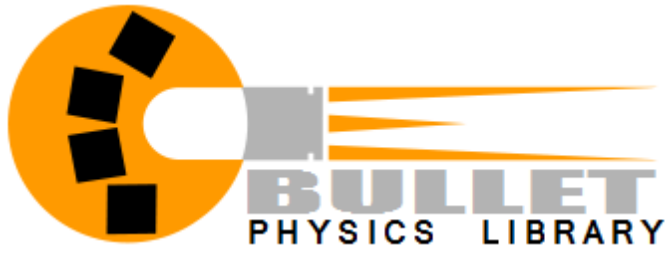


 ModelTest

FPS: 60
Cars: 12
Total: 12



14 Bullet Physics



libGDX

PROJECT SETUP

Name:

Package:

Game class:

Destination:

Android SDK

LibGDX Version **Release 1.2.0**

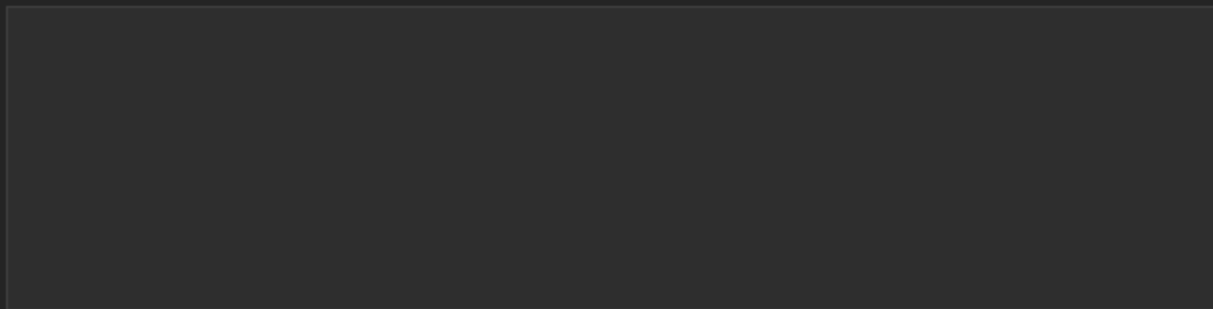
Sub Projects

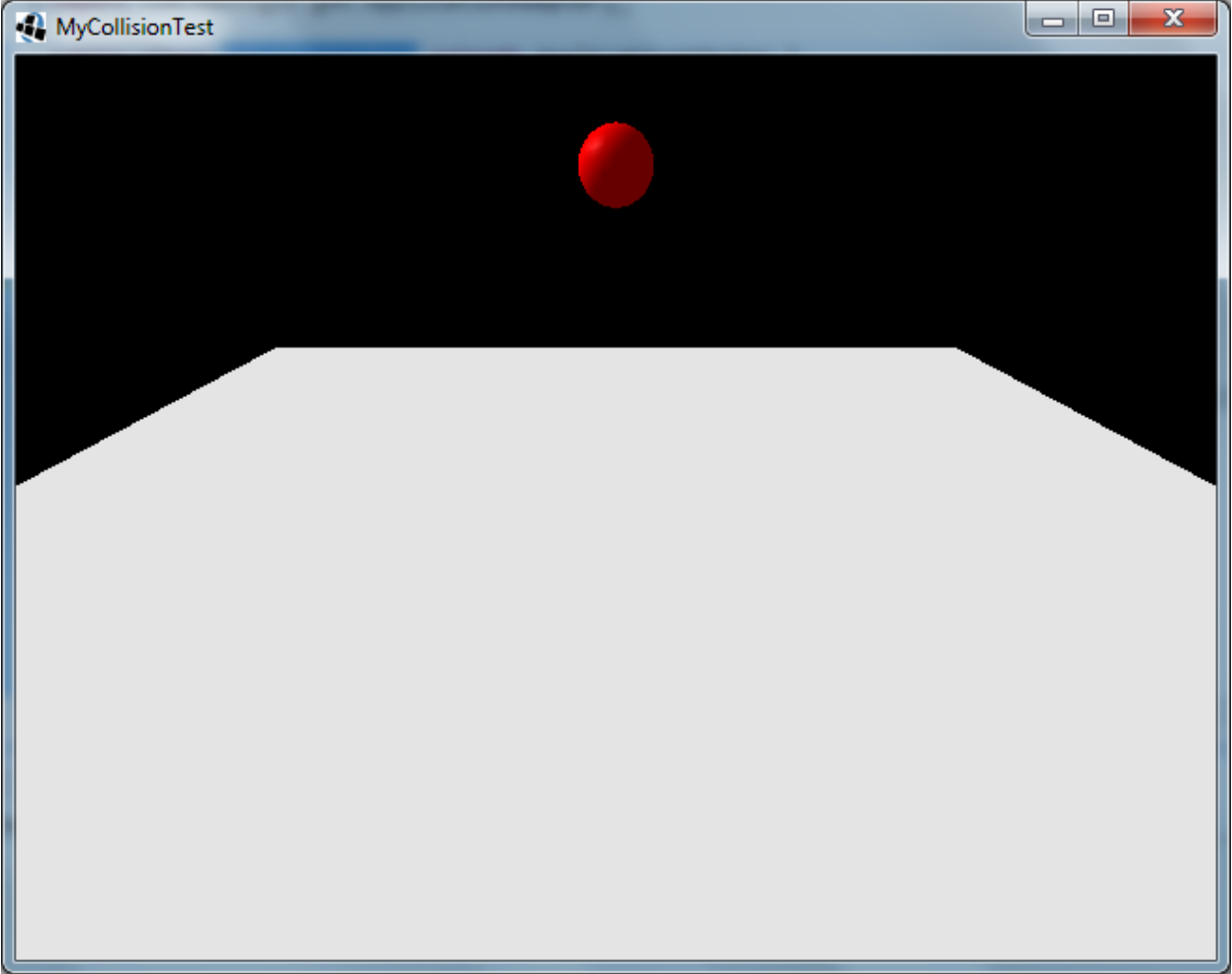
Desktop Android ios Html

Extensions

Bullet Freetype Tools Controllers Box2d

Box2dlights

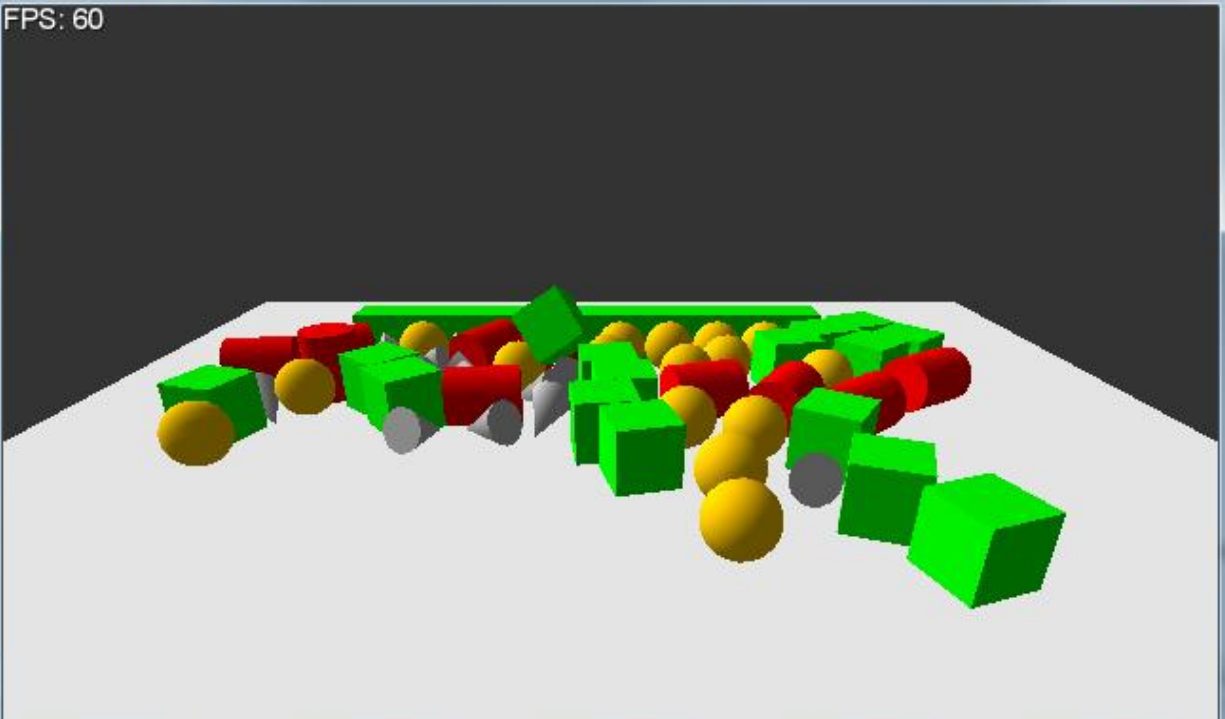




MyCollisionTest



FPS: 60

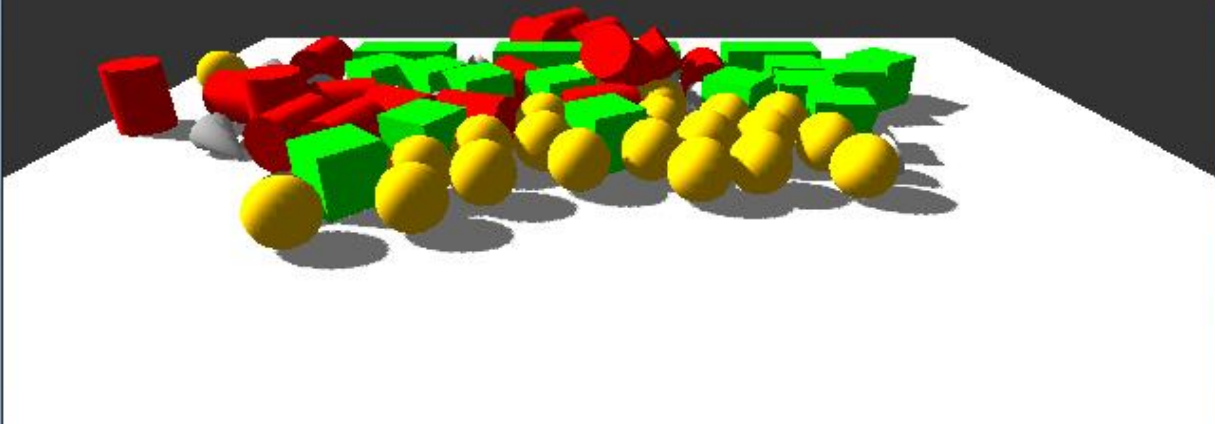


RAY
PICKING

MyCollisionTest



FPS: 61



RAY
PICKING