

```
Arkadiis-MacBook-Pro:~ ak$ java --version
java 11.0.1 2018-10-16 LTS
Java(TM) SE Runtime Environment 18.9 (build 11.0.1+13-LTS)
Java HotSpot(TM) 64-Bit Server VM 18.9 (build 11.0.1+13-LTS, mixed
mode)
Arkadiis-MacBook-Pro:~ ak$ which java
/usr/bin/java
```

Installing AndroidStudio:  
(Custom +AVD)

```
/Users/ak/Library/Android/sdk
```

```
Arkadiis-MacBook-Pro:~ ak$ which python3
/usr/local/bin/python3
```

### **Python 3 and Python 2 Co-existence**

Python.org Python 3.6 and 2.7.x versions can both be installed on your system and will not conflict. Command names for Python 3 contain a 3 in them, `python3` (or `python3.6`), `idle3` (or `idle3.6`), `pip3` (or `pip3.6`), etc. Python 2.7 command names contain a 2 or no digit: `python2` (or `python2.7` or `python`), `idle2` (or `idle2.7` or `idle`), etc.

From `/Applications/Python3.6/Update Shell Profile.command`

```
...
PYTHON_ROOT="/Library/Frameworks/Python.framework/Versions/3.6"
```

Make Symlink output:

```
Last login: Fri Nov 16 19:04:47 on ttys001
/Volumes/Kivy3/MakeSymlinks ; exit;
Arkadiis-MacBook-Pro:~ ak$ /Volumes/Kivy3/MakeSymlinks ; exit;
ln: /usr/local/bin/kivy3: Permission denied
logout
Saving session...
...copying shared history...
...saving history...truncating history files...
...completed.
```

[Process completed]

... MakeSymlinks failed. Fixed with

```
sudo ln -s /Applications/Kivy3.app/Contents/Resources/script /usr/
local/bin/kivy
```

Now :

```
Arkadiis-MacBook-Pro:Kivy3 ak$ kivy
Python 3.6.5 (default, Jun 18 2018, 16:36:13)
[GCC 4.2.1 Compatible Apple LLVM 9.1.0 (clang-902.0.39.1)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
>>>
```

## Install Brew

```
Arkadiis-MacBook-Pro:~ ak$ /usr/bin/ruby -e "$(curl -fsSL
https://raw.githubusercontent.com/Homebrew/install/master/
install)"
```

**==> This script will install:**

```
/usr/local/bin/brew
/usr/local/share/doc/homebrew
/usr/local/share/man/man1/brew.1
/usr/local/share/zsh/site-functions/_brew
/usr/local/etc/bash_completion.d/brew
/usr/local/Homebrew
```

**==> The following existing directories will be made group writable:**

```
/usr/local/bin
```

**==> The following existing directories will have their owner set to ak:**

```
/usr/local/bin
```

**==> The following existing directories will have their group set to admin:**

```
/usr/local/bin
```

**==> The following new directories will be created:**

```
/usr/local/etc
/usr/local/include
/usr/local/lib
/usr/local/sbin
/usr/local/share
/usr/local/var
/usr/local/opt
/usr/local/share/zsh
/usr/local/share/zsh/site-functions
/usr/local/var/homebrew
/usr/local/var/homebrew/linked
/usr/local/Cellar
/usr/local/Caskroom
/usr/local/Homebrew
/usr/local/Frameworks
```

Press RETURN to continue or any other key to abort

**==> /usr/bin/sudo /bin/chmod u+rwx /usr/local/bin**

Password:

```
==> /usr/bin/sudo /bin/chmod g+rxw /usr/local/bin
==> /usr/bin/sudo /usr/sbin/chown ak /usr/local/bin
==> /usr/bin/sudo /usr/bin/chgrp admin /usr/local/bin
==> /usr/bin/sudo /bin/mkdir -p /usr/local/etc /usr/local/
include /usr/local/lib /usr/local/sbin /usr/local/share /usr/
local/var /usr/local/opt /usr/local/share/zsh /usr/local/share/
zsh/site-functions /usr/local/var/homebrew /usr/local/var/
homebrew/linked /usr/local/Cellar /usr/local/Caskroom /usr/
local/Homebrew /usr/local/Frameworks
==> /usr/bin/sudo /bin/chmod g+rxw /usr/local/etc /usr/local/
include /usr/local/lib /usr/local/sbin /usr/local/share /usr/
local/var /usr/local/opt /usr/local/share/zsh /usr/local/share/
zsh/site-functions /usr/local/var/homebrew /usr/local/var/
homebrew/linked /usr/local/Cellar /usr/local/Caskroom /usr/
local/Homebrew /usr/local/Frameworks
==> /usr/bin/sudo /bin/chmod 755 /usr/local/share/zsh /usr/
local/share/zsh/site-functions
==> /usr/bin/sudo /usr/sbin/chown ak /usr/local/etc /usr/local/
include /usr/local/lib /usr/local/sbin /usr/local/share /usr/
local/var /usr/local/opt /usr/local/share/zsh /usr/local/share/
zsh/site-functions /usr/local/var/homebrew /usr/local/var/
homebrew/linked /usr/local/Cellar /usr/local/Caskroom /usr/
local/Homebrew /usr/local/Frameworks
==> /usr/bin/sudo /usr/bin/chgrp admin /usr/local/etc /usr/
local/include /usr/local/lib /usr/local/sbin /usr/local/share /
usr/local/var /usr/local/opt /usr/local/share/zsh /usr/local/
share/zsh/site-functions /usr/local/var/homebrew /usr/local/var/
homebrew/linked /usr/local/Cellar /usr/local/Caskroom /usr/
local/Homebrew /usr/local/Frameworks
==> /usr/bin/sudo /bin/mkdir -p /Users/ak/Library/Caches/
Homebrew
==> /usr/bin/sudo /bin/chmod g+rxw /Users/ak/Library/Caches/
Homebrew
==> /usr/bin/sudo /usr/sbin/chown ak /Users/ak/Library/Caches/
Homebrew
==> /usr/bin/sudo /bin/mkdir -p /Library/Caches/Homebrew
==> /usr/bin/sudo /bin/chmod g+rxw /Library/Caches/Homebrew
==> /usr/bin/sudo /usr/sbin/chown ak /Library/Caches/Homebrew
==> Downloading and installing Homebrew...
remote: Enumerating objects: 26, done.
remote: Counting objects: 100% (26/26), done.
remote: Compressing objects: 100% (17/17), done.
remote: Total 114759 (delta 9), reused 16 (delta 9), pack-reused
114733
Receiving objects: 100% (114759/114759), 26.53 MiB | 898.00 KiB/
s, done.
```

Resolving deltas: 100% (83871/83871), done.

From <https://github.com/Homebrew/brew>

* [new branch]	master	-> origin/master
* [new tag]	0.1	-> 0.1
* [new tag]	0.2	-> 0.2
* [new tag]	0.3	-> 0.3
* [new tag]	0.4	-> 0.4
* [new tag]	0.5	-> 0.5
* [new tag]	0.6	-> 0.6
* [new tag]	0.7	-> 0.7
* [new tag]	0.7.1	-> 0.7.1
* [new tag]	0.8	-> 0.8
* [new tag]	0.8.1	-> 0.8.1
* [new tag]	0.9	-> 0.9
* [new tag]	0.9.1	-> 0.9.1
* [new tag]	0.9.2	-> 0.9.2
* [new tag]	0.9.3	-> 0.9.3
* [new tag]	0.9.4	-> 0.9.4
* [new tag]	0.9.5	-> 0.9.5
* [new tag]	0.9.8	-> 0.9.8
* [new tag]	0.9.9	-> 0.9.9
* [new tag]	1.0.0	-> 1.0.0
* [new tag]	1.0.1	-> 1.0.1
* [new tag]	1.0.2	-> 1.0.2
* [new tag]	1.0.3	-> 1.0.3
* [new tag]	1.0.4	-> 1.0.4
* [new tag]	1.0.5	-> 1.0.5
* [new tag]	1.0.6	-> 1.0.6
* [new tag]	1.0.7	-> 1.0.7
* [new tag]	1.0.8	-> 1.0.8
* [new tag]	1.0.9	-> 1.0.9
* [new tag]	1.1.0	-> 1.1.0
* [new tag]	1.1.1	-> 1.1.1
* [new tag]	1.1.10	-> 1.1.10
* [new tag]	1.1.11	-> 1.1.11
* [new tag]	1.1.12	-> 1.1.12
* [new tag]	1.1.13	-> 1.1.13
* [new tag]	1.1.2	-> 1.1.2
* [new tag]	1.1.3	-> 1.1.3
* [new tag]	1.1.4	-> 1.1.4
* [new tag]	1.1.5	-> 1.1.5
* [new tag]	1.1.6	-> 1.1.6
* [new tag]	1.1.7	-> 1.1.7
* [new tag]	1.1.8	-> 1.1.8
* [new tag]	1.1.9	-> 1.1.9
* [new tag]	1.2.0	-> 1.2.0
* [new tag]	1.2.1	-> 1.2.1

* [new tag]	1.2.2	-> 1.2.2
* [new tag]	1.2.3	-> 1.2.3
* [new tag]	1.2.4	-> 1.2.4
* [new tag]	1.2.5	-> 1.2.5
* [new tag]	1.2.6	-> 1.2.6
* [new tag]	1.3.0	-> 1.3.0
* [new tag]	1.3.1	-> 1.3.1
* [new tag]	1.3.2	-> 1.3.2
* [new tag]	1.3.3	-> 1.3.3
* [new tag]	1.3.4	-> 1.3.4
* [new tag]	1.3.5	-> 1.3.5
* [new tag]	1.3.6	-> 1.3.6
* [new tag]	1.3.7	-> 1.3.7
* [new tag]	1.3.8	-> 1.3.8
* [new tag]	1.3.9	-> 1.3.9
* [new tag]	1.4.0	-> 1.4.0
* [new tag]	1.4.1	-> 1.4.1
* [new tag]	1.4.2	-> 1.4.2
* [new tag]	1.4.3	-> 1.4.3
* [new tag]	1.5.0	-> 1.5.0
* [new tag]	1.5.1	-> 1.5.1
* [new tag]	1.5.10	-> 1.5.10
* [new tag]	1.5.11	-> 1.5.11
* [new tag]	1.5.12	-> 1.5.12
* [new tag]	1.5.13	-> 1.5.13
* [new tag]	1.5.14	-> 1.5.14
* [new tag]	1.5.2	-> 1.5.2
* [new tag]	1.5.3	-> 1.5.3
* [new tag]	1.5.4	-> 1.5.4
* [new tag]	1.5.5	-> 1.5.5
* [new tag]	1.5.6	-> 1.5.6
* [new tag]	1.5.7	-> 1.5.7
* [new tag]	1.5.8	-> 1.5.8
* [new tag]	1.5.9	-> 1.5.9
* [new tag]	1.6.0	-> 1.6.0
* [new tag]	1.6.1	-> 1.6.1
* [new tag]	1.6.10	-> 1.6.10
* [new tag]	1.6.11	-> 1.6.11
* [new tag]	1.6.12	-> 1.6.12
* [new tag]	1.6.13	-> 1.6.13
* [new tag]	1.6.14	-> 1.6.14
* [new tag]	1.6.15	-> 1.6.15
* [new tag]	1.6.16	-> 1.6.16
* [new tag]	1.6.17	-> 1.6.17
* [new tag]	1.6.2	-> 1.6.2
* [new tag]	1.6.3	-> 1.6.3
* [new tag]	1.6.4	-> 1.6.4

```
* [new tag]          1.6.5      -> 1.6.5
* [new tag]          1.6.6      -> 1.6.6
* [new tag]          1.6.7      -> 1.6.7
* [new tag]          1.6.8      -> 1.6.8
* [new tag]          1.6.9      -> 1.6.9
* [new tag]          1.7.0      -> 1.7.0
* [new tag]          1.7.1      -> 1.7.1
* [new tag]          1.7.2      -> 1.7.2
* [new tag]          1.7.3      -> 1.7.3
* [new tag]          1.7.4      -> 1.7.4
* [new tag]          1.7.5      -> 1.7.5
* [new tag]          1.7.6      -> 1.7.6
* [new tag]          1.7.7      -> 1.7.7
* [new tag]          1.8.0      -> 1.8.0
* [new tag]          1.8.1      -> 1.8.1
* [new tag]          1.8.2      -> 1.8.2
* [new tag]          1.8.3      -> 1.8.3
```

HEAD is now at 724115608 Merge pull request #5308 from GauthamGoli/pin-args

**==> Homebrew is run entirely by unpaid volunteers. Please consider donating:**

<https://github.com/Homebrew/brew#donations>

**==> Tapping homebrew/core**

Cloning into '/usr/local/Homebrew/Library/Taps/homebrew/homebrew-core'...

remote: Enumerating objects: 4865, done.

remote: Counting objects: 100% (4865/4865), done.

remote: Compressing objects: 100% (4667/4667), done.

remote: Total 4865 (delta 50), reused 306 (delta 7), pack-reused 0

Receiving objects: 100% (4865/4865), 4.03 MiB | 574.00 KiB/s, done.

Resolving deltas: 100% (50/50), done.

Checking out files: 100% (4882/4882), done.

Tapped 2 commands and 4650 formulae (4,907 files, 12.6MB).

**==> Migrating /Library/Caches/Homebrew to /Users/ak/Library/Caches/Homebrew...**

**==> Deleting /Library/Caches/Homebrew...**

Already up-to-date.

**==> Installation successful!**

**==> Homebrew has enabled anonymous aggregate formulae and cask analytics.**

Read the analytics documentation (and how to opt-out) here:

<https://docs.brew.sh/Analytics>

**==> Homebrew is run entirely by unpaid volunteers. Please**

**consider donating:**

<https://github.com/Homebrew/brew#donations>

**==> Next steps:**

- Run `brew help` to get started
- Further documentation:  
<https://docs.brew.sh>

## Install Dependencies


```
Arkadiis-MacBook-Pro:~ ak$ brew install pkg-config sdl2  
sdl2_image sdl2_ttf sdl2_mixer gstreamer
```

**==> Downloading [https://homebrew.bintray.com/bottles/pkg-config-0.29.2.high\\_sier](https://homebrew.bintray.com/bottles/pkg-config-0.29.2.high_sier)**

**==> Downloading from <https://akamai.bintray.com/f1/f1b29fb5388dccab0fc6af665ab43d>**

#####  
##### 100.0%

**==> Pouring pkg-config-0.29.2.high\_sierra.bottle.tar.gz**


 /usr/local/Cellar/pkg-config/0.29.2: 11 files, 627.2KB

**==> Downloading [https://homebrew.bintray.com/bottles/sdl2-2.0.8.high\\_sierra.bott](https://homebrew.bintray.com/bottles/sdl2-2.0.8.high_sierra.bott)**

**==> Downloading from <https://akamai.bintray.com/25/25cc31a9680beb16321613f740fee>**

#####  
##### 100.0%

**==> Pouring sdl2-2.0.8.high\_sierra.bottle.tar.gz**

 /usr/local/Cellar/sdl2/2.0.8: 86 files, 4.2MB

**==> Installing dependencies for sdl2\_image: jpeg, libpng, libtiff and webp**


**==> Installing sdl2\_image dependency: jpeg**

**==> Downloading [https://homebrew.bintray.com/bottles/jpeg-9c.high\\_sierra.bottle](https://homebrew.bintray.com/bottles/jpeg-9c.high_sierra.bottle).**

**==> Downloading from <https://akamai.bintray.com/17/178200fd8aa50d5db22c5faa4ca40>**

#####  
##### 100.0%

**==> Pouring jpeg-9c.high\_sierra.bottle.tar.gz**

 /usr/local/Cellar/jpeg/9c: 21 files, 724.5KB

**==> Installing sdl2\_image dependency: libpng**

**==> Downloading [https://homebrew.bintray.com/bottles/libpng-1.6.35.high\\_sierra.b](https://homebrew.bintray.com/bottles/libpng-1.6.35.high_sierra.b)**

**==> Downloading from <https://akamai.bintray.com/6d/6d87a8bac8290bef728e8faf1d39a>**

#####  
##### 100.0%

```
==> Pouring libpng-1.6.35.high_sierra.bottle.tar.gz
🍺 /usr/local/Cellar/libpng/1.6.35: 26 files, 1.2MB
==> Installing sdl2_image dependency: libtiff
==> Downloading https://homebrew.bintray.com/bottles/
libtiff-4.0.9_5.high_sierra
==> Downloading from https://akamai.bintray.com/
94/948a1f8f1d24d0dabbbc073a3052d
#####
##### 100.0%
==> Pouring libtiff-4.0.9_5.high_sierra.bottle.tar.gz
🍺 /usr/local/Cellar/libtiff/4.0.9_5: 246 files, 3.5MB
==> Installing sdl2_image dependency: webp
==> Downloading https://homebrew.bintray.com/bottles/
webp-1.0.1.sierra.bottle.ta
==> Downloading from https://akamai.bintray.com/
51/516715778a85358459a7214b2d1bd
#####
##### 100.0%
==> Pouring webp-1.0.1.sierra.bottle.tar.gz
🍺 /usr/local/Cellar/webp/1.0.1: 39 files, 2MB
==> Installing sdl2_image
==> Downloading https://homebrew.bintray.com/bottles/
sdl2_image-2.0.4.high_sierr
#####
##### 100.0%
==> Pouring sdl2_image-2.0.4.high_sierra.bottle.tar.gz
🍺 /usr/local/Cellar/sdl2_image/2.0.4: 10 files, 279.2KB
==> Installing dependencies for sdl2_ttf: freetype
==> Installing sdl2_ttf dependency: freetype
==> Downloading https://homebrew.bintray.com/bottles/
freetype-2.9.1.high_sierra.
==> Downloading from https://akamai.bintray.com/
44/444ef60a543aca6ca26223f46182c
#####
##### 100.0%
==> Pouring freetype-2.9.1.high_sierra.bottle.tar.gz
🍺 /usr/local/Cellar/freetype/2.9.1: 60 files, 2.6MB
==> Installing sdl2_ttf
==> Downloading https://homebrew.bintray.com/bottles/
sdl2_ttf-2.0.14.high_sierra
#####
##### 100.0%
==> Pouring sdl2_ttf-2.0.14.high_sierra.bottle.tar.gz
🍺 /usr/local/Cellar/sdl2_ttf/2.0.14: 10 files, 72.1KB
```




```
==> Installing dependencies for sdl2_mixer: libmodplug, libogg
and libvorbis
==> Installing sdl2_mixer dependency: libmodplug
==> Downloading https://homebrew.bintray.com/bottles/
libmodplug-0.8.9.0.high_sie
#####
##### 100.0%
==> Pouring libmodplug-0.8.9.0.high_sierra.bottle.1.tar.gz
🍺 /usr/local/Cellar/libmodplug/0.8.9.0: 15 files, 336.6KB
==> Installing sdl2_mixer dependency: libogg
==> Downloading https://homebrew.bintray.com/bottles/
libogg-1.3.3.high_sierra.bo
==> Downloading from https://akamai.bintray.com/lb/
1b3faf0793a08736aa1baca0a64ae
#####
##### 100.0%
==> Pouring libogg-1.3.3.high_sierra.bottle.tar.gz
🍺 /usr/local/Cellar/libogg/1.3.3: 97 files, 460.2KB
==> Installing sdl2_mixer dependency: libvorbis
==> Downloading https://homebrew.bintray.com/bottles/
libvorbis-1.3.6.high_sierra
==> Downloading from https://akamai.bintray.com/a9/
a9ec94abce8d34210ce323d2398ae
#####
##### 100.0%
==> Pouring libvorbis-1.3.6.high_sierra.bottle.tar.gz
🍺 /usr/local/Cellar/libvorbis/1.3.6: 157 files, 2.3MB
==> Installing sdl2_mixer
==> Downloading https://homebrew.bintray.com/bottles/
sdl2_mixer-2.0.4.high_sierr
#####
##### 100.0%
==> Pouring sdl2_mixer-2.0.4.high_sierra.bottle.tar.gz
🍺 /usr/local/Cellar/sdl2_mixer/2.0.4: 10 files, 309.7KB
==> Installing dependencies for gstreamer: gettext, libffi, pcre
and glib
==> Installing gstreamer dependency: gettext
==> Downloading https://homebrew.bintray.com/bottles/
gettext-0.19.8.1.high_sierr
==> Downloading from https://akamai.bintray.com/
99/99d2dbd4c9ebfe9bf2a64bd99f3a6
#####
##### 100.0%
==> Pouring gettext-0.19.8.1.high_sierra.bottle.tar.gz
==> Caveats
```

gettext is keg-only, which means it was not symlinked into /usr/local,  
because macOS provides the BSD gettext library & some software gets confused if both are in the library path.

If you need to have gettext first in your PATH run:  
echo 'export PATH="/usr/local/opt/gettext/bin:\$PATH"' >>  
~/.bash\_profile

For compilers to find gettext you may need to set:  
export LDFLAGS="-L/usr/local/opt/gettext/lib"  
export CPPFLAGS="-I/usr/local/opt/gettext/include"

### ==> Summary

 /usr/local/Cellar/gettext/0.19.8.1: 1,935 files, 16.9MB

==> Installing gstreamer dependency: **libffi**

==> Downloading [https://homebrew.bintray.com/bottles/libffi-3.2.1.high\\_sierra.bo](https://homebrew.bintray.com/bottles/libffi-3.2.1.high_sierra.bo)

#####  
##### 100.0%

==> Pouring libffi-3.2.1.high\_sierra.bottle.tar.gz


### ==> Caveats

libffi is keg-only, which means it was not symlinked into /usr/local,  
because some formulae require a newer version of libffi.

For compilers to find libffi you may need to set:  
export LDFLAGS="-L/usr/local/opt/libffi/lib"

For pkg-config to find libffi you may need to set:  
export PKG\_CONFIG\_PATH="/usr/local/opt/libffi/lib/pkgconfig"

### ==> Summary

 /usr/local/Cellar/libffi/3.2.1: 16 files, 297.0KB

==> Installing gstreamer dependency: **pcre**

==> Downloading [https://homebrew.bintray.com/bottles/pcre-8.42.high\\_sierra.bottl](https://homebrew.bintray.com/bottles/pcre-8.42.high_sierra.bottl)

==> Downloading from <https://akamai.bintray.com/b9/b904c008c04003c3f40e30c6ee6a3>

#####  
##### 100.0%

==> Pouring pcre-8.42.high\_sierra.bottle.tar.gz

 /usr/local/Cellar/pcre/8.42: 204 files, 5.3MB

==> Installing gstreamer dependency: **glib**


==> Downloading <https://homebrew.bintray.com/bottles/>

**glib-2.58.1.high\_sierra.bot**

**==> Downloading from <https://akamai.bintray.com/6f/6f4b16f4146bfa8ca324a2e066b60>**

#####  
##### 100.0%

**==> Pouring glib-2.58.1.high\_sierra.bottle.tar.gz**

 /usr/local/Cellar/glib/2.58.1: 435 files, 18.4MB

**==> Installing gstreamer**

**==> Downloading [https://homebrew.bintray.com/bottles/gstreamer-1.14.4.high\\_sierr](https://homebrew.bintray.com/bottles/gstreamer-1.14.4.high_sierr)**

**==> Downloading from <https://akamai.bintray.com/f5/f51c9fc52634124810ce4860655ae>**

#####  
##### 100.0%

**==> Pouring gstreamer-1.14.4.high\_sierra.bottle.tar.gz**

**==> Caveats**

Consider also installing `gst-plugins-base` and `gst-plugins-good`.

The `gst-plugins-*` packages contain `gstreamer-video-1.0`,  
`gstreamer-audio-1.0`,  
and other components needed by most gstreamer applications.

**==> Summary**

 /usr/local/Cellar/gstreamer/1.14.4: 415 files, 21.6MB

**==> Caveats**

**==> gettext**

gettext is keg-only, which means it was not symlinked into `/usr/local`,

because macOS provides the BSD gettext library & some software gets confused if both are in the library path.

If you need to have gettext first in your PATH run:

```
echo 'export PATH="/usr/local/opt/gettext/bin:$PATH"' >>  
~/.bash_profile
```

For compilers to find gettext you may need to set:

```
export LDFLAGS="-L/usr/local/opt/gettext/lib"  
export CPPFLAGS="-I/usr/local/opt/gettext/include"
```

**==> libffi**

libffi is keg-only, which means it was not symlinked into `/usr/local`,

because some formulae require a newer version of libffi.

For compilers to find libffi you may need to set:

```
export LDFLAGS="-L/usr/local/opt/libffi/lib"
```

For pkg-config to find libffi you may need to set:  
export PKG\_CONFIG\_PATH="/usr/local/opt/libffi/lib/pkgconfig"

### ==> gstreamer

Consider also installing gst-plugins-base and gst-plugins-good.

The gst-plugins-\* packages contain gstreamer-video-1.0,  
gstreamer-audio-1.0,  
and other components needed by most gstreamer applications.

## Install Cython

```
Arkadiis-MacBook-Pro:~ ak$ pip3 install Cython==0.26.1
Collecting Cython==0.26.1
  Downloading https://files.pythonhosted.org/packages/64/
f1/7959585c3ad4a78ab43445a19b0bcdce80cca5875dd4bdb8dc81496a7d41/
Cython-0.26.1-cp36-cp36m-
macosx_10_6_intel.macosx_10_9_intel.macosx_10_9_x86_64.macosx_10
_10_intel.macosx_10_10_x86_64.whl (4.6MB)
    100% |████████████████████████████████████████| 4.6MB 847kB/s
Installing collected packages: Cython
Successfully installed Cython-0.26.1
You are using pip version 10.0.1, however version 18.1 is
available.
You should consider upgrading via the 'pip install --upgrade
pip' command.
```

## BTW ... upgrade PIP

```
Arkadiis-MacBook-Pro:~ ak$ pip3 install --upgrade pip
Collecting pip
  Downloading https://files.pythonhosted.org/packages/c2/
d7/90f34cb0d83a6c5631cf71dfe64cc1054598c843a92b400e55675cc2ac37/
pip-18.1-py2.py3-none-any.whl (1.3MB)
    100% |████████████████████████████████████████| 1.3MB 1.6MB/s
Installing collected packages: pip
  Found existing installation: pip 10.0.1
    Uninstalling pip-10.0.1:
      Successfully uninstalled pip-10.0.1
Successfully installed pip-18.1
```

Testing Kivy

testapp.py :

---

```
import kivy
kivy.require('1.10.1') # replace with your current kivy
version
```

```
from kivy.app import App
from kivy.uix.label import Label
```

```
class MyApp(App):
    def build(self):
        return Label(text='Hello world')
```

```
if __name__ == '__main__':
    MyApp().run()
```

---

```
Arkadiis-MacBook-Pro:~ ak$ cd
.CFUserTextEncoding  .Trash/                .atom/                .
bash_profile         .python_history       Documents/
Library/             Music/                Public/
.DS_Store            .android/            .bash_history        .
bash_sessions/       Desktop/             Downloads/
Movies/              Pictures/
Arkadiis-MacBook-Pro:~ ak$ cd
.CFUserTextEncoding  .Trash/                .atom/                .
bash_profile         .python_history       Documents/
Library/             Music/                Public/
.DS_Store            .android/            .bash_history        .
bash_sessions/       Desktop/             Downloads/
Movies/              Pictures/
Arkadiis-MacBook-Pro:~ ak$ cd Documents/
Arkadiis-MacBook-Pro:Documents ak$ cd projects/
Django-Python-Full-
Stack-Web-Developer-master/    Django2.0-Python-Full-
Stack-Web-Developer-NEWmaster.zip
Arkadiis-MacBook-Pro:projects ak$ cd testkivy
```

```
Arkadiis-MacBook-Pro:testkivy ak$ kivy testapp.py
[INFO ] [Logger      ] Record log in /Applications/Kivy3.app/
Contents/Resources/.kivy/logs/kivy_18-11-21_1.txt
[INFO ] [Kivy        ] v1.10.1
[INFO ] [Python       ] v3.6.5 (default, Jun 18 2018, 16:36:13)
[GCC 4.2.1 Compatible Apple LLVM 9.1.0 (clang-902.0.39.1)]
[INFO ] [Factory      ] 194 symbols loaded
```

```

[INFO ] [Image      ] Providers: img_tex, img_imageio,
img_dds, img_sdl2, img_gif (img_pil, img_ffpyplayer ignored)
[INFO ] [Text       ] Provider: sdl2
[INFO ] [Window     ] Provider: sdl2
[INFO ] [GL         ] Using the "OpenGL ES 2" graphics system
[INFO ] [GL         ] Backend used <gl>
[INFO ] [GL         ] OpenGL version <b'2.1 NVIDIA-10.4.14
310.90.30.05b27'>
[INFO ] [GL         ] OpenGL vendor <b'NVIDIA Corporation'>
[INFO ] [GL         ] OpenGL renderer <b'NVIDIA GeForce GT
330M OpenGL Engine'>
[INFO ] [GL         ] OpenGL parsed version: 2, 1
[INFO ] [GL         ] Shading version <b'1.20'>
[INFO ] [GL         ] Texture max size <8192>
[INFO ] [GL         ] Texture max units <16>
[INFO ] [Window     ] auto add sdl2 input provider
[INFO ] [Window     ] virtual keyboard not allowed, single
mode, not docked
[INFO ] [Base       ] Start application main loop
[INFO ] [GL         ] NPOT texture support is available
[INFO ] [Base       ] Leaving application in progress...
Arkadiis-MacBook-Pro:testkivy ak$

```

...

## Trying to start Joystick

```
kivy -m pip3 install kivy-garden
```

```

Arkadiis-MacBook-Pro:testkivy ak$ kivy -m pip install kivy-
garden
Requirement already satisfied: kivy-garden in /Applications/
Kivy3.app/Contents/Frameworks/python/3.6.5/lib/python3.6/site-
packages
Requirement already satisfied: requests in /Applications/
Kivy3.app/Contents/Frameworks/python/3.6.5/lib/python3.6/site-
packages (from kivy-garden)
Requirement already satisfied: urllib3<1.25,>=1.21.1 in /
Applications/Kivy3.app/Contents/Frameworks/python/3.6.5/lib/
python3.6/site-packages (from requests->kivy-garden)
Requirement already satisfied: idna<2.8,>=2.5 in /Applications/
Kivy3.app/Contents/Frameworks/python/3.6.5/lib/python3.6/site-
packages (from requests->kivy-garden)
Requirement already satisfied: certifi>=2017.4.17 in /
Applications/Kivy3.app/Contents/Frameworks/python/3.6.5/lib/
python3.6/site-packages (from requests->kivy-garden)
Requirement already satisfied: chardet<3.1.0,>=3.0.2 in /

```

```

Applications/Kivy3.app/Contents/Frameworks/python/3.6.5/lib/
python3.6/site-packages (from requests->kivy-garden)
You are using pip version 9.0.3, however version 18.1 is
available.
You should consider upgrading via the 'pip install --upgrade
pip' command.
Arkadiis-MacBook-Pro:testkivy ak$ kivy
Python 3.6.5 (default, Jun 18 2018, 16:36:13)
[GCC 4.2.1 Compatible Apple LLVM 9.1.0 (clang-902.0.39.1)] on
darwin
Type "help", "copyright", "credits" or "license" for more
information.
>>> exit()

```

**Above cannot run py programs with kivy.garden.joystick**

**Try another \*hole**

```

Arkadiis-MacBook-Pro:testkivy ak$ pip3 -V
pip 18.1 from /Library/Frameworks/Python.framework/Versions/3.6/
lib/python3.6/site-packages/pip (python 3.6)
Arkadiis-MacBook-Pro:testkivy ak$ pip -V
pip 18.1 from /Library/Frameworks/Python.framework/Versions/3.6/
lib/python3.6/site-packages/pip (python 3.6)
Arkadiis-MacBook-Pro:testkivy ak$ pip install kivy-garden
Collecting kivy-garden
  Using cached https://files.pythonhosted.org/packages/7d/68/
decaee596ff8168a39432eb3949fc7c0be952ebb9467806823bffc165d48/
kivy-garden-0.1.4.tar.gz
Collecting requests (from kivy-garden)
  Using cached https://files.pythonhosted.org/packages/ff/
17/5cbb026005115301a8fb2f9b0e3e8d32313142fe8b617070e7baad20554f/
requests-2.20.1-py2.py3-none-any.whl
Collecting certifi<=2017.4.17 (from requests->kivy-garden)
  Using cached https://files.pythonhosted.org/packages/56/9d/
1d02dd80bc4cd955f98980f28c5ee2200e1209292d5f9e9cc8d030d18655/
certifi-2018.10.15-py2.py3-none-any.whl
Collecting chardet<3.1.0,>=3.0.2 (from requests->kivy-garden)
  Using cached https://files.pythonhosted.org/packages/bc/
a9/01ffebfb562e4274b6487b4bb1ddec7ca55ec7510b22e4c51f14098443b8/
chardet-3.0.4-py2.py3-none-any.whl
Collecting idna<2.8,>=2.5 (from requests->kivy-garden)
  Using cached https://files.pythonhosted.org/packages/4b/2a/
0276479a4b3caeb8a8c1af2f8e4355746a97fab05a372e4a2c6a6b876165/
idna-2.7-py2.py3-none-any.whl
Collecting urllib3<1.25,>=1.21.1 (from requests->kivy-garden)
  Using cached https://files.pythonhosted.org/packages/62/00/

```

```
ee1d7de624db8ba7090d1226aebefab96a2c71cd5cfa7629d6ad3f61b79e/
urllib3-1.24.1-py2.py3-none-any.whl
Installing collected packages: certifi, chardet, idna, urllib3,
requests, kivy-garden
  Running setup.py install for kivy-garden ... done
Successfully installed certifi-2018.10.15 chardet-3.0.4 idna-2.7
kivy-garden-0.1.4 requests-2.20.1 urllib3-1.24.1
```

## **This garden is buggy**

### **Uninstalling**

```
Arkadiis-MacBook-Pro:testkivy ak$ pip3 uninstall kivy-garden
Uninstalling Kivy-Garden-0.1.4:
  Would remove:
    /Library/Frameworks/Python.framework/Versions/3.6/bin/garden
    /Library/Frameworks/Python.framework/Versions/3.6/bin/
garden.bat
    /Library/Frameworks/Python.framework/Versions/3.6/lib/
python3.6/site-packages/Kivy_Garden-0.1.4-py3.6.egg-info
    /Library/Frameworks/Python.framework/Versions/3.6/lib/
python3.6/site-packages/garden/*
Proceed (y/n)? y
  Successfully uninstalled Kivy-Garden-0.1.4
Arkadiis-MacBook-Pro:testkivy ak$ pip uninstall kivy-garden
Skipping kivy-garden as it is not installed.
```

## **Installing from kivy-garden/garden@master**

### **Install requests**

```
sudo pip install requests
```

```
Arkadiis-MacBook-Pro:testkivy ak$ pip install git+https://
github.com/kivy-garden/garden@master
Collecting git+https://github.com/kivy-garden/garden@master
  Cloning https://github.com/kivy-garden/garden (to revision
master) to /private/var/folders/_n/
ndycw_zx7kb8gqy9kqwl3mnr0000gn/T/pip-req-build-vdnsm831
Requirement already satisfied: requests in /Library/Frameworks/
Python.framework/Versions/3.6/lib/python3.6/site-packages (from
Kivy-Garden==0.1.4) (2.20.1)
Requirement already satisfied: urllib3<1.25,>=1.21.1 in /
Library/Frameworks/Python.framework/Versions/3.6/lib/python3.6/
site-packages (from requests->Kivy-Garden==0.1.4) (1.24.1)
Requirement already satisfied: chardet<3.1.0,>=3.0.2 in /
Library/Frameworks/Python.framework/Versions/3.6/lib/python3.6/
```



```
site-packages (from requests->Kivy-Garden==0.1.4) (3.0.4)
Requirement already satisfied: idna<2.8,>=2.5 in /Library/
Frameworks/Python.framework/Versions/3.6/lib/python3.6/site-
packages (from requests->Kivy-Garden==0.1.4) (2.7)
Requirement already satisfied: certifi>=2017.4.17 in /Library/
Frameworks/Python.framework/Versions/3.6/lib/python3.6/site-
packages (from requests->Kivy-Garden==0.1.4) (2018.10.15)
Installing collected packages: Kivy-Garden
  Running setup.py install for Kivy-Garden ... done
Successfully installed Kivy-Garden-0.1.4
Arkadiis-MacBook-Pro:testkivy ak$ garden
usage: garden [-h] {list,search,install,uninstall} ...
```

Garden command-line tool.

positional arguments:

{list,search,install,uninstall}	
list	List all the installed garden packages
search	Search garden package on github
install	Install a garden package
uninstall	Uninstall a garden package

optional arguments:

```
-h, --help          show this help message and exit
Arkadiis-MacBook-Pro:testkivy ak$ garden -h
usage: garden [-h] {list,search,install,uninstall} ...
```

Garden command-line tool.

positional arguments:

{list,search,install,uninstall}	
list	List all the installed garden packages
search	Search garden package on github
install	Install a garden package
uninstall	Uninstall a garden package

optional arguments:

```
-h, --help          show this help message and exit
Arkadiis-MacBook-Pro:testkivy ak$ garden --list
usage: garden [-h] {list,search,install,uninstall} ...
garden: error: unrecognized arguments: --list
Arkadiis-MacBook-Pro:testkivy ak$ garden list
Arkadiis-MacBook-Pro:testkivy ak$ garden search
anchoredscrollview - Anchored ScrollView Kivy widget
androidtabs - No description
androidvlc - No description
animationbuilder - Easy way of writing Kivy Animations
```

animlabel – An animated label implementation, allowing for custom transform functions  
 animlabel\_bezier – an extension of the animlabel tool, to make a label follow a bezier path  
 bar – Bar widget represents the 0–100 range percentage value as a coloured rectangle. It is known as used in statistics graphs.  
 cefpython – CEFPython Kivy widget  
 circulardatetimepicker – Android-like date & time picker for Kivy  
 circularlayout – CircularLayout for Kivy  
 collider – Collides a point with a space defined by a curve.  
 contactform – Kivy garden flower providing widget for sending e-mail from form on app  
 contextmenu – No description  
 datetimepicker – roulette based datetime selector like in iOS and android.  
 ddd – A 3d view widget for kivy  
 desktopvideoplayer – No description  
 docbrowser – Browser for view documentation of Python modules  
 facelock – It is a flower made for kivy-garden  
 filebrowser – An advanced file browser.  
 filechooserthumbview – FileChooserThumbView for Kivy  
 gauge – Kivy Widget Gauge  
 geartick – A gear based Ticker for use in rotating sliders  
 graph – Displays plots on a graph.  
 hotkeybehavior – Global HotKey behavior for a Kivy root widget  
 iconfonts – Simple helper functions to make easier to use icon fonts in Labels and derived widgets  
 inkcanvas – Gesture recognition  
 joystick – A on screen joystick for Kivy  
 knob – Knob widget for Kivy.  
 magnet – A magnet widget for kivy garden

## **Install Joystick**

```

Arkadiis-MacBook-Pro:testkivy ak$ garden search joystick
joystick – A on screen joystick for Kivy
Arkadiis-MacBook-Pro:testkivy ak$ garden
usage: garden [-h] {list,search,install,uninstall} ...
  
```

Garden command-line tool.

```

positional arguments:
  {list,search,install,uninstall}
    list                List all the installed garden packages
    search              Search garden package on github
  
```

install  
uninstall

Install a garden package  
Uninstall a garden package

optional arguments:

-h, --help show this help message and exit

Arkadiis-MacBook-Pro:testkivy ak\$ garden install joystick  
Downloading [https://github.com/kivy-garden/garden.joystick/](https://github.com/kivy-garden/garden.joystick/archive/master.zip)  
archive/master.zip ...

Progression 1024 |

Progression 2048 /

Progression 3072 -

...

Progression 930816 |

Progression 931650 /

Download done (931650 downloaded)

Extracting...

Installing new version...

Done! garden.joystick is installed at: /Users/ak/.kivy/garden/  
garden.joystick

Cleaning...

### But Joystick is not available yet

Arkadiis-MacBook-Pro:testkivy ak\$ kivy testjoystick.py

[INFO ] [Logger ] Record log in /Applications/Kivy3.app/  
Contents/Resources/.kivy/logs/kivy\_18-11-23\_4.txt

[INFO ] [Kivy ] v1.10.1

[INFO ] [Python ] v3.6.5 (default, Jun 18 2018, 16:36:13)

[GCC 4.2.1 Compatible Apple LLVM 9.1.0 (clang-902.0.39.1)]

[INFO ] [Factory ] 194 symbols loaded

[INFO ] [Image ] Providers: img\_tex, img\_imageio,  
img\_dds, img\_sdl2, img\_gif (img\_pil, img\_ffpyplayer ignored)

Traceback (most recent call last):

File "testjoystick.py", line 2, in <module>

from kivy.garden.joystick import Joystick

File "<frozen importlib.\_bootstrap>", line 971, in

\_find\_and\_load

File "<frozen importlib.\_bootstrap>", line 955, in

\_find\_and\_load\_unlocked

File "<frozen importlib.\_bootstrap>", line 656, in

\_load\_unlocked

File "<frozen importlib.\_bootstrap>", line 628, in

\_load\_backward\_compatible

KeyError: 'kivy.garden.joystick'

Arkadiis-MacBook-Pro:testkivy ak\$ garden list

joystick

Arkadiis-MacBook-Pro:testkivy ak\$ which garden

```
/Library/Frameworks/Python.framework/Versions/3.6/bin/garden
Arkadiis-MacBook-Pro:testkivy ak$ which kivy
/usr/local/bin/kivy
Arkadiis-MacBook-Pro:testkivy ak$ ls
testapp.py testjoystick.kv testjoystick.py
```

### Add Joystick package locally

```
Arkadiis-MacBook-Pro:testkivy ak$ garden install --app joystick
Downloading https://github.com/kivy-garden/garden.joystick/
archive/master.zip ...
Progression 1024 |
Progression 2048 /
Progression 3072 -
...
Progression 930816 |
Progression 931650 /
Download done (931650 downloaded)
Extracting...
Installing new version...
Done! garden.joystick is installed at: /Users/ak/Documents/
projects/testkivy/libs/garden/garden.joystick
Cleaning...
Arkadiis-MacBook-Pro:testkivy ak$ kivy testjoystick.py
[INFO ] [Logger      ] Record log in /Applications/Kivy3.app/
Contents/Resources/.kivy/logs/kivy_18-11-23_5.txt
[INFO ] [Kivy         ] v1.10.1
[INFO ] [Python        ] v3.6.5 (default, Jun 18 2018, 16:36:13)
[GCC 4.2.1 Compatible Apple LLVM 9.1.0 (clang-902.0.39.1)]
[INFO ] [Factory       ] 194 symbols loaded
[INFO ] [Image         ] Providers: img_tex, img_imageio,
img_dds, img_sdl2, img_gif (img_pil, img_ffpyplayer ignored)
[INFO ] [Text          ] Provider: sdl2
[INFO ] [Window        ] Provider: sdl2
[INFO ] [GL            ] Using the "OpenGL ES 2" graphics system
[INFO ] [GL            ] Backend used <gl>
[INFO ] [GL            ] OpenGL version <b'2.1 NVIDIA-10.4.14
310.90.30.05b27'>
[INFO ] [GL            ] OpenGL vendor <b'NVIDIA Corporation'>
[INFO ] [GL            ] OpenGL renderer <b'NVIDIA GeForce GT
330M OpenGL Engine'>
[INFO ] [GL            ] OpenGL parsed version: 2, 1
[INFO ] [GL            ] Shading version <b'1.20'>
[INFO ] [GL            ] Texture max size <8192>
[INFO ] [GL            ] Texture max units <16>
[INFO ] [Window        ] auto add sdl2 input provider
[INFO ] [Window        ] virtual keyboard not allowed, single
```

```
mode, not docked
[INFO    ] [Base          ] Start application main loop
[INFO    ] [GL              ] NPOT texture support is available
[INFO    ] [Base          ] Leaving application in progress...
```

## Installing Buildozer

```
Arkadiis-MacBook-Pro:testkivy ak$ sudo pip install buildozer
```

Password:

The directory '/Users/ak/Library/Caches/pip/http' or its parent directory is not owned by the current user and the cache has been disabled. Please check the permissions and owner of that directory. If executing pip with sudo, you may want sudo's -H flag.

The directory '/Users/ak/Library/Caches/pip' or its parent directory is not owned by the current user and caching wheels has been disabled. check the permissions and owner of that directory. If executing pip with sudo, you may want sudo's -H flag.

Collecting buildozer

Downloading <https://files.pythonhosted.org/packages/a7/2c/b98d30feaf26e44eb31a3a20428b6b179888b22b765e160aec6863c5c551/buildozer-0.36.tar.gz> (93kB)

100% |██| 102kB 1.2MB/s

Collecting pexpect (from buildozer)

Downloading <https://files.pythonhosted.org/packages/89/e6/b5a1de8b0cc4e07ca1b305a4fcc3f9806025c1b651ea302646341222f88b/pexpect-4.6.0-py2.py3-none-any.whl> (57kB)

100% |██| 61kB 2.3MB/s

Collecting virtualenv (from buildozer)

Downloading <https://files.pythonhosted.org/packages/7c/17/9b7b6cddfd255388b58c61e25b091047f6814183e1d63741c8df8dcd65a2/virtualenv-16.1.0-py2.py3-none-any.whl> (1.9MB)

100% |██| 1.9MB 2.5MB/s

Collecting ptyprocess>=0.5 (from pexpect->buildozer)

Downloading <https://files.pythonhosted.org/packages/d1/29/605c2cc68a9992d18dada28206eeada56ea4bd07a239669da41674648b6f/ptyprocess-0.6.0-py2.py3-none-any.whl>

Installing collected packages: ptyprocess, pexpect, virtualenv, buildozer

Running setup.py install for buildozer ... done

Successfully installed buildozer-0.36 pexpect-4.6.0

ptyprocess-0.6.0 virtualenv-16.1.0

```
sudo pip install https://github.com/kivy/buildozer/archive/
master.zip
```

### Error No module named 'sh'

```
Arkadiis-MacBook-Pro:testkivy ak$ buildozer android debug
# Check configuration tokens
Traceback (most recent call last):
  File "/Library/Frameworks/Python.framework/Versions/3.6/bin/
buildozer", line 11, in <module>
    load_entry_point('buildozer==0.37.dev0', 'console_scripts',
'buildozer')()
  File "/Library/Frameworks/Python.framework/Versions/3.6/lib/
python3.6/site-packages/buildozer/scripts/client.py", line 13,
in main
    Buildozer().run_command(sys.argv[1:])
  File "/Library/Frameworks/Python.framework/Versions/3.6/lib/
python3.6/site-packages/buildozer/__init__.py", line 1053, in
run_command
    targets = [x[0] for x in self.targets()]
  File "/Library/Frameworks/Python.framework/Versions/3.6/lib/
python3.6/site-packages/buildozer/__init__.py", line 1053, in
<listcomp>
    targets = [x[0] for x in self.targets()]
  File "/Library/Frameworks/Python.framework/Versions/3.6/lib/
python3.6/site-packages/buildozer/__init__.py", line 945, in
targets
    fromlist=['buildozer'])
  File "/Library/Frameworks/Python.framework/Versions/3.6/lib/
python3.6/site-packages/buildozer/targets/android.py", line 28,
in <module>
    import sh
ModuleNotFoundError: No module named 'sh'
```

### No sh.py present here

```
Arkadiis-MacBook-Pro:bin ak$ cd /Library/Frameworks/
Python.framework/Versions/3.6/lib/python3.6/site-packages/
buildozer/targets/
Arkadiis-MacBook-Pro:targets ak$ ls
__init__.py __pycache__ android.py  android_new.py
    ios.py      osx.py
Arkadiis-MacBook-Pro:targets ak$ cd /Library/Frameworks/
Python.framework/Versions/3.6/lib/python3.6/
Arkadiis-MacBook-Pro:python3.6 ak$ ls
```

LICENSE.txt	ctypes	mailcap.py
	socketserver.py	
__future__.py	curses	
mimetypes.py	sqlite3	
__phello__.foo.py	datetime.py	
modulefinder.py	sre_compile.py	
__pycache__	dbm	multiprocessing
	sre_constants.py	
_bootlocale.py	decimal.py	
netrc.py	sre_parse.py	
_collections_abc.py	difflib.py	
nntplib.py	ssl.py	
_compat_pickle.py	dis.py	
ntpath.py	stat.py	
_compression.py	distutils	
nturl2path.py	statistics.py	
_dummy_thread.py	doctest.py	
numbers.py	string.py	
_markupbase.py	dummy_threading.py	
opcode.py	stringprep.py	
_osx_support.py	email	
operator.py	struct.py	
_pydecimal.py	encodings	
optparse.py	subprocess.py	
_pyio.py	ensurepip	os.py
	sunau.py	
_sitebuiltins.py	enum.py	
pathlib.py	symbol.py	
_strptime.py	filecmp.py	
pdb.py	symtable.py	
_sysconfigdata_m_darwin_darwin.py	fileinput.py	
	pickle.py	sysconfig.py
_threading_local.py	fnmatch.py	
pickletools.py	tabnanny.py	
_weakrefset.py	formatter.py	
pipes.py	tarfile.py	
abc.py	fractions.py	
pkgutil.py	telnetlib.py	
aifc.py	ftplib.py	platform.py
	tempfile.py	
antigravity.py	functools.py	
plistlib.py	test	
argparse.py	genericpath.py	
poplib.py	textwrap.py	
ast.py	getopt.py	posixpath.py
	this.py	
asynchat.py	getpass.py	pprint.py

asyncio	threading.py	profile.py
	gettext.py	
asyncore.py	timeit.py	pstats.py
	glob.py	
base64.py	tkinter	pty.py
	gzip.py	
bdb.py	token.py	py_compile.py
	hashlib.py	
binhex.py	tokenize.py	pyclbr.py
	heapq.py	
bisect.py	trace.py	pydoc.py
	hmac.py	
bz2.py	traceback.py	pydoc_data
	html	
cProfile.py	tracemalloc.py	queue.py
	http	
calendar.py	tty.py	quopri.py
	idlelib	
cgi.py	turtle.py	random.py
	imaplib.py	
cgitb.py	turtledemo	re.py
	imghdr.py	
chunk.py	types.py	reprlib.py
	imp.py	
cmd.py	typing.py	rlcompleter.py
	importlib	
code.py	unittest	runpy.py
	inspect.py	
codecs.py	urllib	sched.py
	io.py	
codeop.py	uu.py	
secrets.py	ipaddress.py	
collections	uuid.py	
	json	selectors.py
colorsys.py	venv	
	keyword.py	shelve.py
compileall.py	warnings.py	
shlex.py	lib-dynload	
concurrent	wave.py	
	lib2to3	shutil.py
	weakref.py	
config-3.6m-darwin	linecache.py	
signal.py	webbrowser.py	
configparser.py	locale.py	
site-packages	wsgiref	
contextlib.py	logging	
site.py	xdrlib.py	



copy.py		lzma.py	smtpd.py
	xml		
copyreg.py		macpath.py	smtpplib.py
	xmlrpc		
crypt.py		macurl2path.py	
sndhdr.py		zipapp.py	
csv.py		mailbox.py	socket.py
	zipfile.py		

## Install sh.py

```
ModuleNotFoundError: No module named 'sh'
Arkadiis-MacBook-Pro:testkivy ak$ pip install sh
Collecting sh
  Downloading https://files.pythonhosted.org/packages/4a/22/17b22ef5b049f12080f5815c41bf94de3c229217609e469001a8f80c1b3d/sh-1.12.14-py2.py3-none-any.whl
Installing collected packages: sh
Successfully installed sh-1.12.14
Arkadiis-MacBook-Pro:testkivy ak$ python3
Python 3.6.6 (v3.6.6:4cf1f54eb7, Jun 26 2018, 19:50:54)
[GCC 4.2.1 Compatible Apple LLVM 6.0 (clang-600.0.57)] on darwin
Type "help", "copyright", "credits" or "license" for more
information.
>>> import sh
```

**ValueError: read of closed file, android-ndk-r9c-darwin-x86\_64.tar.bz2**

```
# Android NDK is missing, downloading
# Downloading http://dl.google.com/android/repository/android-ndk-r9c-darwin-x86_64.tar.bz2
Traceback (most recent call last):
  File "/Library/Frameworks/Python.framework/Versions/3.6/bin/buildozer", line 11, in <module>
    load_entry_point('buildozer==0.37.dev0', 'console_scripts', 'buildozer')()
  File "/Library/Frameworks/Python.framework/Versions/3.6/lib/python3.6/site-packages/buildozer/scripts/client.py", line 13, in main
    Buildozer().run_command(sys.argv[1:])
  File "/Library/Frameworks/Python.framework/Versions/3.6/lib/python3.6/site-packages/buildozer/__init__.py", line 1059, in run_command
```

```

    self.target.run_commands(args)
File "/Library/Frameworks/Python.framework/Versions/3.6/lib/
python3.6/site-packages/buildozer/target.py", line 92, in
run_commands
    func(args)
File "/Library/Frameworks/Python.framework/Versions/3.6/lib/
python3.6/site-packages/buildozer/target.py", line 102, in
cmd_debug
    self.buildozer.prepare_for_build()
File "/Library/Frameworks/Python.framework/Versions/3.6/lib/
python3.6/site-packages/buildozer/__init__.py", line 176, in
prepare_for_build
    self.target.install_platform()
File "/Library/Frameworks/Python.framework/Versions/3.6/lib/
python3.6/site-packages/buildozer/targets/android.py", line 507,
in install_platform
    self._install_android_ndk()
File "/Library/Frameworks/Python.framework/Versions/3.6/lib/
python3.6/site-packages/buildozer/targets/android.py", line 319,
in _install_android_ndk
    cwd=self.buildozer.global_platform_dir)
File "/Library/Frameworks/Python.framework/Versions/3.6/lib/
python3.6/site-packages/buildozer/__init__.py", line 687, in
download
    urlretrieve(url, filename, report_hook)
File "/Library/Frameworks/Python.framework/Versions/3.6/lib/
python3.6/urllib/request.py", line 1819, in retrieve
    block = fp.read(bs)
File "/Library/Frameworks/Python.framework/Versions/3.6/lib/
python3.6/tempfile.py", line 485, in func_wrapper
    return func(*args, **kwargs)
ValueError: read of closed file

```

**As developer.android site lists versions of NDKs:**

[https://developer.android.com/ndk/downloads/older\\_releases](https://developer.android.com/ndk/downloads/older_releases)

## Android NDK, Revision 17c (June 2018)

Platform	Package	Size (Bytes)	SHA1 Checksum
----------	---------	-----------------	---------------

Windows 32-bit	<a href="#">android-ndk-r17c-windows-x86.zip</a>	608358310	5bb25bf13fa494ee6c3433474c7aa90009f9f6a9
Windows 64-bit	<a href="#">android-ndk-r17c-windows-x86_64.zip</a>	650626501	3e3b8d1650f9d297d130be2b342db956003f5992
Mac OS X	<a href="#">android-ndk-r17c-darwin-x86_64.zip</a>	675091485	f97e3d7711497e3b4faf9e7b3fa0f0da90bb649c
Linux 64-bit (x86)	<a href="#">android-ndk-r17c-linux-x86_64.zip</a>	709387703	12cacc70c3fd2f40574015631c00f41fb8a39048

## Android NDK, Revision 16b (December 2017)

Platform	Package	Size (Bytes)	SHA1 Checksum
Windows 32-bit	<a href="#">android-ndk-r16b-windows-x86.zip</a>	656720029	becaf3d445a4877ca1a9300a62f0934a4838c7fa
Windows 64-bit	<a href="#">android-ndk-r16b-windows-x86_64.zip</a>	723301086	f3f1909ed1052e98dda2c79d11c22f3da28daf25
Mac OS X	<a href="#">android-ndk-r16b-darwin-x86_64.zip</a>	839630771	e51e615449b98c716cf912057e2682e75d55e2de
Linux 64-bit (x86)	<a href="#">android-ndk-r16b-linux-x86_64.zip</a>	852525873	42aa43aae89a50d1c66c3f9fdecd676936da6128

## Android NDK, Revision 15c (July 2017)

Platform	Package	Size (Bytes)	SHA1 Checksum
Windows 32-bit	<a href="#">android-ndk-r15c-windows-x86.zip</a>	784778144	f2e47121feb73ec34ced5e947c bf1adc6b56246e
Windows 64-bit	<a href="#">android-ndk-r15c-windows-x86_64.zip</a>	849733996	970bb2496de0eada74674bb1 b06d79165f725696
Mac OS X	<a href="#">android-ndk-r15c-darwin-x86_64.zip</a>	960251267	ea4b5d76475db84745aa8828 000d009625fc1f98
Linux 64-bit (x86)	<a href="#">android-ndk-r15c-linux-x86_64.zip</a>	974976754	0bf02d4e8b85fd770fd7b9b2cd ec57f9441f27a2

## Android NDK, Revision 14b (March 2017)

Platform	Package	Size (Bytes)	SHA1 Checksum
Windows 32-bit	<a href="#">android-ndk-r14b-windows-x86.zip</a>	707533928	070443eaa7fa37ed337f91c65 5e02ca708d37c92
Windows 64-bit	<a href="#">android-ndk-r14b-windows-x86_64.zip</a>	769151176	a625e8c599bccdb9061b61dcf 3d1f1a01071613f
Mac OS X	<a href="#">android-ndk-r14b-darwin-x86_64.zip</a>	824705073	2bf582c43f6da16416e66203d 158a6dfaba4277c

Linux 64-bit (x86)	<a href="#">android-ndk-r14b-linux-x86_64.zip</a>	840626 594	becd161da6ed9a823e25be5c 02955d9cbca1dbeb
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## Android NDK, Revision 13b (October 2016)

Platform	Package	Size (Bytes)	SHA1 Checksum
Windows 32-bit	<a href="#">android-ndk-r13b-windows-x86.zip</a>	620461544	4eb1288b1d4134a9d6474eb247f0448808d52408
Windows 64-bit	<a href="#">android-ndk-r13b-windows-x86_64.zip</a>	681320123	649d306559435c244cec5881b880318bb3dee53a
Mac OS X	<a href="#">android-ndk-r13b-darwin-x86_64.zip</a>	665967997	71fe653a7bf5db08c3af154735b6ccbc12f0add5
Linux 64-bit (x86)	<a href="#">android-ndk-r13b-linux-x86_64.zip</a>	687311866	0600157c4ddf50ec15b8a037cf474143f718fd0

## Android NDK, Revision 12b (June 2016)

Platform	Package	Size (Bytes)	SHA1 Checksum
Windows 32-bit	<a href="#">android-ndk-r12b-windows-x86.zip</a>	706453972	8e6eef0091dac2f3c7a1ecbb7070d4fa22212c04
Windows 64-bit	<a href="#">android-ndk-r12b-windows-x86_64.zip</a>	749567353	337746d8579a1c65e8a69bf9cbdc9849bcacf7f5

Mac OS X	<a href="#">android-ndk-r12b-darwin-x86_64.zip</a>	734135279	e257fe12f8947be9f79c10c3fffe87fb9406118a
Linux 64-bit (x86)	<a href="#">android-ndk-r12b-linux-x86_64.zip</a>	755551010	170a119bfa0f0ce5dc932405eaa3a7cc61b27694

## Android NDK, Revision 11c (March 2016)

Platform	Package	Size (Bytes)	SHA1 Checksum
Windows 32-bit	<a href="#">android-ndk-r11c-windows-x86.zip</a>	728899082	ff939bde6cd374eecbd2c3b2ad218697f9a5038c
Windows 64-bit	<a href="#">android-ndk-r11c-windows-x86_64.zip</a>	771407642	3d89deb97b3191c7e5555f1313ad35059479f071
Mac OS X	<a href="#">android-ndk-r11c-darwin-x86_64.zip</a>	772428792	4ce8e7ed8dfe08c5fe58aedf7f46be2a97564696
Linux 64-bit (x86)	<a href="#">android-ndk-r11c-linux-x86_64.zip</a>	794135138	de5ce9bddeee16fb6af2b9117e9566352aa7e279

## Android NDK, Revision 10e (May 2015)

Platform	Package	Size (Bytes)	SHA1 Checksum
Windows 32-bit	<a href="#">android-ndk-r10e-windows-x86.zip</a>	3205043409	1d0b8f2835be741f3048fb03c0a3e9f71ab7f357

Windows 64-bit	<a href="#">android-ndk-r10e-windows-x86_64.zip</a>	5006864954	a29f3ae41fb02b64ca8ad2b0903f74356f953d9f
Mac OS X	<a href="#">android-ndk-r10e-darwin-x86_64.zip</a>	3530423262	6be8598e4ed3d9dd42998c8cb666f0ee502b1294
Linux 64-bit (x86)	<a href="#">android-ndk-r10e-linux-x86_64.zip</a>	3514714136	f692681b007071103277f6edc6f91cb5c5494a32

... consider another way

### Delete Buildozer from Master switch to Stable

```
Arkadiis-MacBook-Pro:testkivy ak$ sudo pip uninstall https://github.com/kivy/buildozer/archive/master.zip
```

Password:

The directory '/Users/ak/Library/Caches/pip/http' or its parent directory is not owned by the current user and the cache has been disabled. Please check the permissions and owner of that directory. If executing pip with sudo, you may want sudo's -H flag.

You must give at least one requirement to uninstall (see "pip help uninstall")

```
Arkadiis-MacBook-Pro:testkivy ak$ sudo pip uninstall buildozer
```

The directory '/Users/ak/Library/Caches/pip/http' or its parent directory is not owned by the current user and the cache has been disabled. Please check the permissions and owner of that directory. If executing pip with sudo, you may want sudo's -H flag.

Uninstalling buildozer-0.37.dev0:

Would remove:

/Library/Frameworks/Python.framework/Versions/3.6/bin/buildozer

/Library/Frameworks/Python.framework/Versions/3.6/bin/buildozer-remote

/Library/Frameworks/Python.framework/Versions/3.6/lib/python3.6/site-packages/buildozer-0.37.dev0-py3.6.egg-info

/Library/Frameworks/Python.framework/Versions/3.6/lib/python3.6/site-packages/buildozer/\*

Proceed (y/n)? y

```
Successfully uninstalled buildozer-0.37.dev0
Arkadiis-MacBook-Pro:testkivy ak$ sudo pip install buildozer
The directory '/Users/ak/Library/Caches/pip/http' or its parent
directory is not owned by the current user and the cache has
been disabled. Please check the permissions and owner of that
directory. If executing pip with sudo, you may want sudo's -H
flag.
The directory '/Users/ak/Library/Caches/pip' or its parent
directory is not owned by the current user and caching wheels
has been disabled. check the permissions and owner of that
directory. If executing pip with sudo, you may want sudo's -H
flag.
Collecting buildozer
  Downloading https://files.pythonhosted.org/packages/a7/2c/
b98d30feaf26e44eb31a3a20428b6b179888b22b765e160aec6863c5c551/
buildozer-0.36.tar.gz (93kB)
    100% |████████████████████████████████████████| 102kB 1.2MB/s
Requirement already satisfied: pexpect in /Library/Frameworks/
Python.framework/Versions/3.6/lib/python3.6/site-packages (from
buildozer) (4.6.0)
Requirement already satisfied: virtualenv in /Library/
Frameworks/Python.framework/Versions/3.6/lib/python3.6/site-
packages (from buildozer) (16.1.0)
Requirement already satisfied: ptyprocess>=0.5 in /Library/
Frameworks/Python.framework/Versions/3.6/lib/python3.6/site-
packages (from pexpect->buildozer) (0.6.0)
Installing collected packages: buildozer
  Running setup.py install for buildozer ... done
Successfully installed buildozer-0.36
```

**Seems to be downloading NDK 9c normally**

**About Known GOOD Sets SDK/NDK**

## Android SDK

This is a list of Android SDK with some informations useful for us to track the issues with buildozer or python-for-android. There is one rule to know: **never use latest SDK without newer NDK released**; This is due that NDK have a directory per API (android-20, android-21 etc..); If you use latest SDK, NDK will not



have the directory for it, therefore the compilation will not work.

- SDK 20: Current default for buildozer
- SDK 21/22 (TO FIX): New notification API, current python-for-android implementation doesn't work
- SDK 25: No more "android" tool, "sdkmanager" is the only entrypoint now for installing SDK. Both python-for-android and buildozer will not work.
- SDK 25.3.0: ant is removed. There is a branch "sdl2\_gradle" that intent to have a bootstrap for sdl2 based on gradle.

## Working SDK/NDK (KGS - Known Good Set)

- SDK 20 / NDK 9c
- SDK 20 / NDK 13b
- SDK 20 / CrystaX NDK 10.3.2
- SDK 20 / API 24 / NDK 14b / Python 3.7 (with PR <https://github.com/kivy/python-for-android/pull/1412>)
- SDK 20 / API 26 / NDK 15c / Python 3.7 (with PR <https://github.com/kivy/python-for-android/pull/1412>)
- SDK 24 / API 28 / NDK 17c / Python 2.7 (with PR <https://github.com/kivy/python-for-android/pull/1381>)

### Error with no path /tools.save

```
pexpect.exceptions.ExceptionPexpect: The command was not found
or was not executable: /Users/ak/.buildozer/android/platform/
android-sdk-20/tools.save/android.
```

### Expected solution

```
/Users/ak/.buildozer/android/platform/android-sdk-20/
ln -s tools tools.save
```

**Didn't find any valid dependency graphs.**

```

# Run '/Library/Frameworks/Python.framework/Versions/3.6/bin/
python3.6 -m pythonforandroid.toolchain create --dist_name=myapp
--bootstrap=sdl2 --requirements=python3,kivy --arch armeabi-v7a
--copy-libs --color=always --storage-dir="/Users/ak/Documents/
projects/testkivy/.buildozer/android/platform/build"'
# Cwd /Users/ak/Documents/projects/testkivy/.buildozer/android/
platform/python-for-android-new-toolchain
[INFO]: Will compile for the following archs: armeabi-v7a
[INFO]: Found Android API target in $ANDROIDAPI
[INFO]: Available Android APIs are (19)
[INFO]: Requested API target 19 is available, continuing.
[INFO]: Found NDK dir in $ANDROIDNDK
[INFO]: Got NDK version from $ANDROIDNDKVER
[INFO]: Using Google NDK r9c
[INFO]: Found virtualenv at /Library/Frameworks/
Python.framework/Versions/3.6/bin/virtualenv
[INFO]: ccache is missing, the build will not be optimized in
the future.
[INFO]: Found the following toolchain versions: ['4.6',
'4.8', 'clang3.3']
[INFO]: Picking the latest gcc toolchain, here 4.8
[WARNING]: Missing executable: autoconf is not installed
[WARNING]: Missing executable: automake is not installed
[WARNING]: Missing executable: libtoolize is not installed
[INFO]: No existing dists meet the given requirements!
[INFO]: No dist exists that meets your requirements, so one
will be built.
[ERROR]: Didn't find any valid dependency graphs.
[ERROR]: This means that some of your requirements pull in
conflicting dependencies.
[ERROR]: Exiting.
# Command failed: /Library/Frameworks/Python.framework/Versions/
3.6/bin/python3.6 -m pythonforandroid.toolchain create --
dist_name=myapp --bootstrap=sdl2 --requirements=python3,kivy --
arch armeabi-v7a --copy-libs --color=always --storage-dir="/
Users/ak/Documents/projects/testkivy/.buildozer/android/
platform/build"
#
# Buildozer failed to execute the last command
# The error might be hidden in the log above this error
# Please read the full log, and search for it before
# raising an issue with buildozer itself.
# In case of a bug report, please add a full log with log_level
= 2

```

## ssl.SSLError

ssl.SSLError: [SSL: CERTIFICATE\_VERIFY\_FAILED] certificate verify failed (\_ssl.c:841)

```
/Applications/Python\ 3.6/Install\ Certificates.command
```

## Error python3crystax

**[ERROR]:** The python3crystax recipe can only be built when using the CrystaX NDK. Exiting.

## Crystal and brew error

```
brew install crystax-ndk
```

**Error:** No available formula with the name "crystax-ndk"  
It was migrated from homebrew/core to homebrew/cask.  
You can access it again by running:  
    brew tap homebrew/cask  
And then you can install it by running:  
    brew cask install crystax-ndk

```
Arkadiis-MacBook-Pro:testkivy ak$ brew tap homebrew/cask
```

```
...
```

```
Arkadiis-MacBook-Pro:testkivy ak$ brew cask install crystax-ndk
```

```
==> Caveats
```

You may want to add to your profile:

```
'export ANDROID_NDK_HOME="/usr/local/share/crystax-ndk"'
```

```
==> Satisfying dependencies
```

```
==> Downloading https://www.crystax.net/download/crystax-ndk-10.3.2-darwin-x86_64.tar.xz
```

```
#####
```

```
##### 100.0%
```

```
==> Verifying SHA-256 checksum for Cask 'crystax-ndk'.
```

```
==> Installing Cask crystax-ndk
```

```
==> Linking Binary 'ndk_exec.sh' to '/usr/local/bin/ndk-build'.
```

```
==> Linking Binary 'ndk_exec.sh' to '/usr/local/bin/ndk-
```

```
depends'.
```

```
==> Linking Binary 'ndk_exec.sh' to '/usr/local/bin/ndk-gdb'.
```

```
==> Linking Binary 'ndk_exec.sh' to '/usr/local/bin/ndk-stack'.
```

```
==> Linking Binary 'ndk_exec.sh' to '/usr/local/bin/ndk-which'.
```



crystax-ndk was successfully installed!

**Error python versions used by bulldozer 3.5 instead installed 3.6 sh.CommandNotFound: python3.5**

```
requirements = python3crystax==3.6
```

**Error vidcore\_lite cimported module has no attribute 'BCMDisplayException'**

```
vidcore_lite/egl.pyx:619:17: cimported module has no attribute 'BCMDisplayException'
```

```
Arkadiis-MacBook-Pro:testkivy ak$ which cython
/Library/Frameworks/Python.framework/Versions/3.6/bin/cython
Arkadiis-MacBook-Pro:testkivy ak$ cython -V
Cython version 0.26.1
```

```
p4a.branch = master NO
Or
pip install 'cython == 0.25' still waiting, but passes this step
??
```

**Error Could not determine java version from '11.0.1'**

Install Java8 <- possible **solution**  
or  
Install Gradle

```
brew tap caskroom/versions
brew cask install java8
```

```
brew install gradle - installed cradle 5 but unseccessful
```

p4a.branch = master **not an option**

Switching **Java Versions**

```
Arkadiis-MacBook-Pro:testkivy ak$ /usr/libexec/java_home -V
Matching Java Virtual Machines (2):
  11.0.1, x86_64: "Java SE 11.0.1"    /Library/Java/
JavaVirtualMachines/jdk-11.0.1.jdk/Contents/Home
  1.8.0_192, x86_64: "Java SE 8" /Library/Java/
JavaVirtualMachines/jdk1.8.0_192.jdk/Contents/Home

/Library/Java/JavaVirtualMachines/jdk-11.0.1.jdk/Contents/Home
Arkadiis-MacBook-Pro:testkivy ak$ export JAVA_HOME=`/usr/
```

```
libexec/java_home -v 1.8`
Arkadiis-MacBook-Pro:testkivy ak$ java -version
java version "1.8.0_192"
Java(TM) SE Runtime Environment (build 1.8.0_192-b12)
Java HotSpot(TM) 64-Bit Server VM (build 25.192-b12, mixed mode)
```

**DONE!**

**Error while compiling Could not determine java version from '11.0.1'.**

**FAILURE: Build failed with an exception.**

\* What went wrong:  
Could not determine java version from '11.0.1'.

**Apply this**

```
export JAVA_HOME=`/usr/libexec/java_home -v 1.8`
```

Error **unknown file type '.pxi'**

```
/Library/Frameworks/Python.framework/Versions/3.6/lib/python3.6/
site-packages/setuptools/dist.py:397: UserWarning: Normalizing
'1.1.2-dev' to '1.1.2.dev0'
  normalized_version,
  running build_ext
Warning: Extension name 'jnius' does not match fully qualified
name 'jnius.jnius' of 'jnius/jnius.pyx'
Compiling jnius/jnius.pyx because it depends on jnius/
config.pxi.
[1/1] Cythonizing jnius/jnius.pyx
building 'jnius' extension
error: unknown file type '.pxi' (from 'jnius/jni.pxi')
```

pip3 install cython==0.26 and added kivy==master to the spec file

Or pip3 install cython==0.25.2 and added kivy==master to the spec file

+

requirements = python3crystax==3.6,kivy

**Error kivy app DO NOTHING controls are OK but robot sees NO COMMANDS**

Set in spec file:

```
# (list) Permissions
android.permissions = INTERNET
```

---

After Xcode installed PyCharm asks for  
Accepting Xcode/iOS license to run Git

Run  
sudo xcodebuild -license  
sudo xcodebuild -license

---

Add device  
Id:  
e1b1b040a6abd4a5b4f34c18eab7bb34fab1e8df

SN:  
DX3PHKZXFF9R

---

## Kivy for iOS

<https://github.com/kivy/kivy-ios>

```
Arkadiis-MacBook-Pro:~ ak$  
Arkadiis-MacBook-Pro:~ ak$ cd Documents/  
Arkadiis-MacBook-Pro:Documents ak$ cd projects/  
Arkadiis-MacBook-Pro:projects ak$ brew install python
```

Python has been installed as  
/usr/local/bin/python3

Unversioned symlinks `python`, `python-config`, `pip` etc.  
pointing to  
`python3`, `python3-config`, `pip3` etc., respectively, have  
been installed into  
/usr/local/opt/python/libexec/bin

If you need Homebrew's Python 2.7 run

```
brew install python@2
```

You can install Python packages with

```
pip3 install <package>
```

They will install into the site-package directory

```
/usr/local/lib/python3.7/site-packages
```

See: <https://docs.brew.sh/Homebrew-and-Python>

## ==> Summary



```
/usr/local/Cellar/python/3.7.2_1: 3,833 files, 59.3MB
```

..download and extract

<https://github.com/kivy/kivy-ios.git>

```
Into cd projects/
```

```
Arkadiis-MacBook-Pro:projects ak$ cd kivy-ios-master/
```

Collecting pbxproj==2.5.1 (from -r requirements.txt (line 1))

Downloading <https://files.pythonhosted.org/packages/7f/0e/042142a3753284d7775afc12b1df7374610e693c1c21536d6ceeb212f55d/pbxproj-2.5.1.tar.gz>

```
Collecting openstep_parser>=1.3.1 (from pbxproj==2.5.1->requirements.txt (line 1))
```

```

  Downloading https://files.pythonhosted.org/packages/d1/43/
acaccb0c00e2b23fc02d5c02051c26dff7fe61d151acc8486ba60bd3bfff7/
openstep_parser-1.3.1.tar.gz

```

```
Collecting docopt (from pbxproj==2.5.1->r requirements.txt
(line 1))
```

```

    Downloading https://files.pythonhosted.org/packages/
a2/55/8f8cab2afd404cf578136ef2cc5dfb50baa1761b68c9da1fb1e4eed343
c9/docopt-0.6.2.tar.gz

```

```
Collecting future (from pbxproj==2.5.1->r requirements.txt
(line 1))
```

```

  Downloading https://files.pythonhosted.org/packages/90/52/
e20466b85000a181e1e144fd8305caf2cf475e2f9674e797b222f8105f5f/
future-0.17.1.tar.gz (829kB)

```

100% | ██ | 829kB 912kB/s

```
Installing collected packages: future, openstep-parser, docopt,
pbxproj
```

```
Running setup.py install for future ... done
```

```
Running setup.py install for openstep-parser ... done
```

```
Running setup.py install for docopt ... done
```

Running setup.py install for pbxproj ... done

Successfully installed docopt-0.6.2 future-0.17.1 openstep-

parser-1.3.1 pbxproj-2.5.1

You are using pip version 18.1, however version 19.0.1 is available.

You should consider upgrading via the 'pip install --upgrade pip' command.

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ xcode-select --install
xcode-select: error: command line tools are already installed,
use "Software Update" to install updates
```

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ xcode-select --print-
path
/Applications/Xcode.app/Contents/Developer
```

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ brew install autoconf
automake libtool pkg-config
```

Updating Homebrew...

==> **Auto-updated Homebrew!**

Updated 1 tap (homebrew/core).

==> **Updated Formulae**

opam

verilator

**Warning:** autoconf 2.69 is already installed and up-to-date

To reinstall 2.69, run `brew reinstall autoconf`

**Warning:** automake 1.16.1\_1 is already installed and up-to-date

To reinstall 1.16.1\_1, run `brew reinstall automake`

**Warning:** libtool 2.4.6\_1 is already installed and up-to-date

To reinstall 2.4.6\_1, run `brew reinstall libtool`

**Warning:** pkg-config 0.29.2 is already installed and up-to-date

To reinstall 0.29.2, run `brew reinstall pkg-config`

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$
```

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ brew link libtool
```

**Warning:** Already linked: /usr/local/Cellar/libtool/2.4.6\_1

To relink: brew unlink libtool && brew link libtool

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ pip install
cython==0.28.1
```

Collecting cython==0.28.1

Downloading [https://files.pythonhosted.org/packages/dd/1f/fbc379eeb53eedbfff12d0623a154902c06ac6a386830cdc30d4ccb874453/](https://files.pythonhosted.org/packages/dd/1f/fbc379eeb53eedbfff12d0623a154902c06ac6a386830cdc30d4ccb874453/Cython-0.28.1-cp36-cp36m-)  
Cython-0.28.1-cp36-cp36m-

macosx\_10\_6\_intel.macosx\_10\_9\_intel.macosx\_10\_9\_x86\_64.macosx\_10\_10\_intel.macosx\_10\_10\_x86\_64.whl (5.2MB)

100% |██| 5.2MB 824kB/s

Installing collected packages: cython

Found existing installation: Cython 0.25.2



```
Uninstalling Cython-0.25.2:
  Successfully uninstalled Cython-0.25.2
Successfully installed cython-0.28.1
```

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ ls toolchain.py
toolchain.py
```

### **Error pbxproj requirements is missing**

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ ./toolchain.py build
python3 kivy
ERROR: pbxproj requirements is missing
To install: pip install -r requirements.txt
Arkadiis-MacBook-Pro:kivy-ios-master ak$ which python3
/Library/Frameworks/Python.framework/Versions/3.6/bin/python3
```

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ pip3 install -r
requirements.txt
Requirement already satisfied: pbxproj==2.5.1 in /Library/
Frameworks/Python.framework/Versions/3.6/lib/python3.6/site-
packages (from -r requirements.txt (line 1)) (2.5.1)
Requirement already satisfied: openstep_parser>=1.3.1 in /
Library/Frameworks/Python.framework/Versions/3.6/lib/python3.6/
site-packages (from pbxproj==2.5.1->-r requirements.txt (line
1)) (1.3.1)
Requirement already satisfied: docopt in /Library/Frameworks/
Python.framework/Versions/3.6/lib/python3.6/site-packages (from
pbxproj==2.5.1->-r requirements.txt (line 1)) (0.6.2)
Requirement already satisfied: future in /Library/Frameworks/
Python.framework/Versions/3.6/lib/python3.6/site-packages (from
pbxproj==2.5.1->-r requirements.txt (line 1)) (0.17.1)
```

```
Arkadiis-MacBook-Pro:Versions ak$ cd /Library/Frameworks/
Python.framework/Versions/3.6/lib/python3.6/site-packages
Arkadiis-MacBook-Pro:site-packages ak$ ls
Cython                                openstep_parser-1.3.1-py3.6.egg-info
Cython-0.28.1.dist-info               past
Kivy_Garden-0.1.4-py3.6.egg-info     pbxproj
README.txt                           pbxproj-2.5.1-py3.6.egg-info
__pycache__                          pexpect
buildozer                            pexpect-4.6.0.dist-info
buildozer-0.36-py3.6.egg-info         pip
certifi                              pip-19.0.1.dist-info
certifi-2018.10.15.dist-info          pkg_resources
chardet                              ptyprocess
chardet-3.0.4.dist-info               ptyprocess-0.6.0.dist-info
cython.py                             pyximport
```

```

docopt-0.6.2-py3.6.egg-info    requests
docopt.py                     requests-2.20.1.dist-info
easy_install.py               setuptools
future                        setuptools-39.0.1.dist-info
future-0.17.1-py3.6.egg-info  sh-1.12.14.dist-info
garden                        sh.py
idna                          urllib3
idna-2.7.dist-info            urllib3-1.24.1.dist-info
libfuturize                   virtualenv-16.1.0.dist-info
libpasteurize                 virtualenv.py
openstep_parser               virtualenv_support

```

### Workaround:

As toolchain.py does Not explicitly aim python version in  
`#!/usr/bin/env python`

Should start as

```
python3 ./toolchain.py build python3 kivy
```

```
Error /bin/sh: python3.7: command not found
generate-posix-vars failed
```

More:

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ brew install python3
Updating Homebrew...
```

```
==> Auto-updated Homebrew!
```

```
Updated 2 taps (homebrew/core and homebrew/cask).
```

```
==> Updated Formulae
```

```
tintin
```

**Warning:** python 3.7.2\_1 is already installed, it's just not linked

You can use `brew link python` to link this version.

Workaround

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ brew link python
```

```
Linking /usr/local/Cellar/python/3.7.2_1...
```

```
Error: Could not symlink bin/2to3
```

```
Target /usr/local/bin/2to3
```

```
already exists. You may want to remove it:
```

```
rm '/usr/local/bin/2to3'
```

To force the link and overwrite all conflicting files:

```
brew link --overwrite python
```

To list all files that would be deleted:

```
brew link --overwrite --dry-run python
```

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$
```

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$
```

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ To list all files that  
would be deleted:
```

```
-bash: To: command not found
```

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ brew link --overwrite
```

```
--dry-run python
```

Would remove:

```
/usr/local/bin/2to3 -> /Library/Frameworks/Python.framework/
```

```
Versions/3.6/bin/2to3
```

```
/usr/local/bin/idle3 -> /Library/Frameworks/Python.framework/
```

```
Versions/3.6/bin/idle3
```

```
/usr/local/bin/pydoc3 -> /Library/Frameworks/Python.framework/
```

```
Versions/3.6/bin/pydoc3
```

```
/usr/local/bin/python3 -> /Library/Frameworks/Python.framework/
```

```
Versions/3.6/bin/python3
```

```
/usr/local/bin/python3-config -> /Library/Frameworks/
```

```
Python.framework/Versions/3.6/bin/python3-config
```

```
/usr/local/bin/pyvenv -> /Library/Frameworks/Python.framework/
```

```
Versions/3.6/bin/pyvenv
```

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ brew link --overwrite
```

```
--dry-run python
```

Would remove:

```
/usr/local/bin/2to3 -> /Library/Frameworks/Python.framework/
```

```
Versions/3.6/bin/2to3
```

```
/usr/local/bin/idle3 -> /Library/Frameworks/Python.framework/
```

```
Versions/3.6/bin/idle3
```

```
/usr/local/bin/pydoc3 -> /Library/Frameworks/Python.framework/
```

```
Versions/3.6/bin/pydoc3
```

```
/usr/local/bin/python3 -> /Library/Frameworks/Python.framework/
```

```
Versions/3.6/bin/python3
```

```
/usr/local/bin/python3-config -> /Library/Frameworks/
```

```
Python.framework/Versions/3.6/bin/python3-config
```

```
/usr/local/bin/pyvenv -> /Library/Frameworks/Python.framework/
```

```
Versions/3.6/bin/pyvenv
```

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ brew link --overwrite
```

```
python
```

```
Linking /usr/local/Cellar/python/3.7.2_1... 24 symlinks created
```

```
brew switch python 3.7.2_1
```

...

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ python3 ./toolchain.py  
build python3 kivy
```

...

...

```
creating /Users/ak/Documents/projects/kivy-ios-master/build/  
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/tutorials  
creating /Users/ak/Documents/projects/kivy-ios-master/build/  
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/  
pong  
copying examples/tutorials/pong/pong.kv -> /Users/ak/Documents/  
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/  
share/kivy-examples/tutorials/pong  
copying examples/tutorials/pong/main.py -> /Users/ak/Documents/  
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/  
share/kivy-examples/tutorials/pong  
creating /Users/ak/Documents/projects/kivy-ios-master/build/  
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/  
pong/steps  
creating /Users/ak/Documents/projects/kivy-ios-master/build/  
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/  
pong/steps/step4  
copying examples/tutorials/pong/steps/step4/pong.kv -> /Users/  
ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/  
kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/pong/steps/  
step4  
copying examples/tutorials/pong/steps/step4/main.py -> /Users/  
ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/  
kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/pong/steps/  
step4  
creating /Users/ak/Documents/projects/kivy-ios-master/build/  
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/  
pong/steps/step3  
copying examples/tutorials/pong/steps/step3/pong.kv -> /Users/  
ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/  
kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/pong/steps/  
step3  
copying examples/tutorials/pong/steps/step3/main.py -> /Users/  
ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/  
kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/pong/steps/  
step3  
creating /Users/ak/Documents/projects/kivy-ios-master/build/  
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/
```

```
pong/steps/step2
copying examples/tutorials/pong/steps/step2/pong.kv -> /Users/
ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/pong/steps/
step2
copying examples/tutorials/pong/steps/step2/main.py -> /Users/
ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/pong/steps/
step2
creating /Users/ak/Documents/projects/kivy-ios-master/build/
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/
pong/steps/step5
copying examples/tutorials/pong/steps/step5/pong.kv -> /Users/
ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/pong/steps/
step5
copying examples/tutorials/pong/steps/step5/main.py -> /Users/
ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/pong/steps/
step5
creating /Users/ak/Documents/projects/kivy-ios-master/build/
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/
pong/steps/step1
copying examples/tutorials/pong/steps/step1/pong.kv -> /Users/
ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/pong/steps/
step1
copying examples/tutorials/pong/steps/step1/main.py -> /Users/
ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/pong/steps/
step1
creating /Users/ak/Documents/projects/kivy-ios-master/build/
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/
notes
creating /Users/ak/Documents/projects/kivy-ios-master/build/
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/
notes/final
copying examples/tutorials/notes/final/note.kv -> /Users/ak/
Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/notes/final
copying examples/tutorials/notes/final/main.py -> /Users/ak/
Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/notes/final
creating /Users/ak/Documents/projects/kivy-ios-master/build/
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/
notes/final/data
copying examples/tutorials/notes/final/data/icon.png -> /Users/
```

```
ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/tutorials/notes/final/
data
creating /Users/ak/Documents/projects/kivy-ios-master/build/
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/shader
copying examples/shader/rotated.kv -> /Users/ak/Documents/
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/
share/kivy-examples/shader
copying examples/shader/plasma.kv -> /Users/ak/Documents/
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/
share/kivy-examples/shader
copying examples/shader/rotated.py -> /Users/ak/Documents/
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/
share/kivy-examples/shader
copying examples/shader/plasma.py -> /Users/ak/Documents/
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/
share/kivy-examples/shader
copying examples/shader/shadertree.kv -> /Users/ak/Documents/
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/
share/kivy-examples/shader
copying examples/shader/shadertree.py -> /Users/ak/Documents/
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/
share/kivy-examples/shader
copying examples/shader/tex3.jpg -> /Users/ak/Documents/
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/
share/kivy-examples/shader
creating /Users/ak/Documents/projects/kivy-ios-master/build/
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/application
copying examples/application/app_with_kv_in_template1.py -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/application
copying examples/application/app_suite.py -> /Users/ak/
Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/application
copying examples/application/test.kv -> /Users/ak/Documents/
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/
share/kivy-examples/application
copying examples/application/app_with_build.py -> /Users/ak/
Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/application
copying examples/application/app_with_config.py -> /Users/ak/
Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/application
copying examples/application/testkvfile.kv -> /Users/ak/
Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/application
copying examples/application/app_with_kv.py -> /Users/ak/
```

```
Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/application
creating /Users/ak/Documents/projects/kivy-ios-master/build/
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/
application/app_suite_data
copying examples/application/app_suite_data/testkvdir.kv -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/application/
app_suite_data
creating /Users/ak/Documents/projects/kivy-ios-master/build/
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/
application/template1
copying examples/application/template1/test.kv -> /Users/ak/
Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/application/template1
creating /Users/ak/Documents/projects/kivy-ios-master/build/
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/kinect
copying examples/kinect/kinectviewer.py -> /Users/ak/Documents/
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/
share/kivy-examples/kinect
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kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/frameworks
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twisted
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```

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share/kivy-examples/widgets  
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creating /Users/ak/Documents/projects/kivy-ios-master/build/  
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sequenced\_images

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sequenced_images
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sequenced_images
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sequenced_images/uix
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sequenced_images/uix
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sequenced_images/uix
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sequenced_images/data
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sequenced_images/data/images
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sequenced_images/data/images
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button_white_animated.zip -> /Users/ak/Documents/projects/kivy-
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sequenced_images/data/images
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sequenced_images/data/images
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examples/widgets/sequenced_images/data/images
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lists
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ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
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```

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lists/fruit_images
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fruit_images
copying examples/widgets/lists/fruit_images/Plum.512.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
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fruit_images
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x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
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fruit_images
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Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
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fruit_images
copying examples/widgets/lists/fruit_images/Lime.256.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
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fruit_images
copying examples/widgets/lists/fruit_images/Plum.128.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
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fruit_images
copying examples/widgets/lists/fruit_images/Cantaloupe.512.jpg -
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x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
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fruit_images
copying examples/widgets/lists/fruit_images/Peach.512.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Avocado.512.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
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fruit_images
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Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
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fruit_images
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fruit_images
copying examples/widgets/lists/fruit_images/Nectarine.128.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
```

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fruit_images
copying examples/widgets/lists/fruit_images/Lemon.256.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Avocado.128.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Tangerine.256.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Cherry.256.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Watermelon.128.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Grapefruit.32.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Orange.256.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Apple.32.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Tangerine.64.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Peach.64.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Lemon.32.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Pineapple.64.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
```

```
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Nectarine.64.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Apple.256.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Watermelon.512.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Grapefruit.256.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Cherry.64.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Kiwifruit.512.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Banana.512.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Cantaloupe.32.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Pineapple.256.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Pear.32.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Banana.128.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Kiwifruit.128.jpg -
```



```
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Grape.256.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Lime.64.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Grape.64.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Honeydew.32.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Kiwifruit.64.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Apple.512.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Watermelon.64.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Avocado.64.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Watermelon.256.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Orange.128.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Orange.64.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
```

```
copying examples/widgets/lists/fruit_images/Orange.512.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Apple.128.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Strawberry.32.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Grape.512.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Pineapple.128.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Grapefruit.128.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Plum.64.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Banana.32.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Grapefruit.512.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Kiwifruit.256.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Banana.256.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Pineapple.512.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
```

```
fruit_images
copying examples/widgets/lists/fruit_images/Grape.128.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Pear.128.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Grapefruit.64.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Lime.128.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Honeydew.128.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Cantaloupe.256.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Apple.64.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Tangerine.32.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Peach.32.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Lemon.64.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Peach.256.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Pineapple.32.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
```

```
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Plum.256.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Nectarine.32.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Pear.512.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Honeydew.512.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Lime.512.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Cherry.32.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Lemon.512.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Cantaloupe.64.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/
fruit_image_attribution.txt -> /Users/ak/Documents/projects/
kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/share/
kivy-examples/widgets/lists/fruit_images
copying examples/widgets/lists/fruit_images/Tangerine.512.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Cherry.512.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Avocado.256.jpg -> /
```

```
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Pear.64.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Lime.32.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Grape.32.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Cherry.128.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Tangerine.128.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Strawberry.256.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Lemon.128.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Honeydew.64.jpg -> /
Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
copying examples/widgets/lists/fruit_images/Nectarine.256.jpg -
> /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/lists/
fruit_images
creating /Users/ak/Documents/projects/kivy-ios-master/build/
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/widgets/
recycleview
copying examples/widgets/recycleview/basic_data.py -> /Users/ak/
Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/widgets/recycleview
creating /Users/ak/Documents/projects/kivy-ios-master/build/
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/keyboard
```

```
copying examples/keyboard/android.txt -> /Users/ak/Documents/
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/
share/kivy-examples/keyboard
copying examples/keyboard/main.py -> /Users/ak/Documents/
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/
share/kivy-examples/keyboard
copying examples/keyboard/numeric.json -> /Users/ak/Documents/
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/
share/kivy-examples/keyboard
creating /Users/ak/Documents/projects/kivy-ios-master/build/
kivy/x86_64/kivy-1.10.1/iosbuild/share/kivy-examples/cover
copying examples/cover/cover_image.py -> /Users/ak/Documents/
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/
share/kivy-examples/cover
copying examples/cover/cover_video.py -> /Users/ak/Documents/
projects/kivy-ios-master/build/kivy/x86_64/kivy-1.10.1/iosbuild/
share/kivy-examples/cover
running install_egg_info
Writing /Users/ak/Documents/projects/kivy-ios-master/build/kivy/
x86_64/kivy-1.10.1/iosbuild/lib/python3.7/site-packages/
Kivy-1.10.1-py3.7.egg-info
```

This step seem to be passed ...

## Try to **Create the Xcode project**

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ python3 ./toolchain.py
usage: toolchain <command> [<args>]
```

Available commands:

build	Build a recipe (compile a library for the
required target	architecture)
clean	Clean the build of the specified recipe
distclean	Clean the build and the result
recipes	List all the available recipes
status	List all the recipes and their build status

Xcode:

create	Create a new xcode project
--------	----------------------------

update	Update an existing xcode project (frameworks, libraries..)
launchimage	Create Launch images for your xcode project
icon	Create Icons for your xcode project
pip	Install a pip dependency into the distribution

## Try some demos ...

```
/Users/ak/Documents/projects/kivy-ios-master/build/kivy/x86_64/
kivy-1.10.1/iosbuild/share/kivy-examples/demo/touchtracer
```

Touchtracer compiled to emulator – OK

## Testing environment

```
/Users/ak/Documents/projects/micropython-robot/venv
```

```
home = /usr/local/bin
include-system-site-packages = true
version = 3.6.6
```

---

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ cd /usr/local/bin/
```

```
Arkadiis-MacBook-Pro:bin ak$ ls -a pyth*
python3          python3.6-config  python3.7
  python3.7m-config
python3-config   python3.6m        python3.7-config
python3.6        python3.6m-config python3.7m
```

```
Arkadiis-MacBook-Pro:bin ak$ ls -la pyth*
lrwxr-xr-x  1 ak    admin   36 Jan 31 00:26 python3 -> ../Cellar/
python/3.7.2_1/bin/python3
lrwxr-xr-x  1 ak    admin   43 Jan 31 00:26 python3-config -> ../
Cellar/python/3.7.2_1/bin/python3-config
lrwxr-xr-x  1 root  wheel   71 Nov 16 18:49 python3.6 -
> ../../../../Library/Frameworks/Python.framework/Versions/3.6/bin/
python3.6
lrwxr-xr-x  1 root  wheel   78 Nov 16 18:49 python3.6-config -
> ../../../../Library/Frameworks/Python.framework/Versions/3.6/bin/
python3.6-config
lrwxr-xr-x  1 root  wheel   72 Nov 16 18:49 python3.6m -
> ../../../../Library/Frameworks/Python.framework/Versions/3.6/bin/
```

```
python3.6m
lrwxr-xr-x  1 root  wheel  79 Nov 16 18:49 python3.6m-config -
> ../../../../Library/Frameworks/Python.framework/Versions/3.6/bin/
python3.6m-config
lrwxr-xr-x  1 ak    admin  38 Jan 31 00:26 python3.7 -> ../
Cellar/python/3.7.2_1/bin/python3.7
lrwxr-xr-x  1 ak    admin  45 Jan 31 00:26 python3.7-config -
> ../Cellar/python/3.7.2_1/bin/python3.7-config
lrwxr-xr-x  1 ak    admin  39 Jan 31 00:26 python3.7m -> ../
Cellar/python/3.7.2_1/bin/python3.7m
lrwxr-xr-x  1 ak    admin  46 Jan 31 00:26 python3.7m-config -
> ../Cellar/python/3.7.2_1/bin/python3.7m-config
```

---

## Adding kivy to python3.7 installation

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ brew install pkg-config
sdl2 sdl2_image sdl2_ttf sdl2_mixer gstreamer
```

```
Updating Homebrew...
```

```
==> Auto-updated Homebrew!
```

```
Updated 3 taps (homebrew/cask-versions, homebrew/core and
homebrew/cask).
```

```
==> Updated Formulae
```

cryfs	kakoune	meson	packer
ruby-build	ship	topgrade	urbit
youtube-dl			
enet	logtalk	mogenerator	ruby
sbcl	scaffold	ucloud	v8
zsh			

```
Warning: pkg-config 0.29.2 is already installed and up-to-date
To reinstall 0.29.2, run `brew reinstall pkg-config`
```

```
Warning: sdl2_image 2.0.4 is already installed and up-to-date
To reinstall 2.0.4, run `brew reinstall sdl2_image`
```

```
Warning: sdl2_ttf 2.0.14 is already installed and up-to-date
To reinstall 2.0.14, run `brew reinstall sdl2_ttf`
```

```
Warning: sdl2_mixer 2.0.4 is already installed and up-to-date
To reinstall 2.0.4, run `brew reinstall sdl2_mixer`
```

```
Warning: gstreamer 1.14.4 is already installed and up-to-date
To reinstall 1.14.4, run `brew reinstall gstreamer`
```

```
Error: sdl2 2.0.8 is already installed
```

```
To upgrade to 2.0.9, run `brew upgrade sdl2`
```

```
>>
```



**This seems to be done wrong:**

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ pip install https://
github.com/kivy/kivy/archive/master.zip
Collecting https://github.com/kivy/kivy/archive/master.zip
  Downloading https://github.com/kivy/kivy/archive/master.zip
    - 41.1MB 2.2MB/s
Requirement already satisfied: Kivy-Garden>=0.1.4 in /Library/
Frameworks/Python.framework/Versions/3.6/lib/python3.6/site-
packages (from Kivy==1.11.0.dev0) (0.1.4)
Collecting docutils (from Kivy==1.11.0.dev0)
  Using cached https://files.pythonhosted.org/packages/36/fa/
08e9e6e0e3cbd1d362c3bbe8d01d0aedb2155c4ac112b19ef3cae8eed8d/
docutils-0.14-py3-none-any.whl
Collecting pygments (from Kivy==1.11.0.dev0)
  Downloading https://files.pythonhosted.org/packages/13/
e5/6d710c9cf96c31ac82657bcfb441df328b22df8564d58d0c4cd62612674c/
Pygments-2.3.1-py2.py3-none-any.whl (849kB)
    100% |████████████████████████████████████████| 849kB 1.8MB/s
Requirement already satisfied: requests in /Library/Frameworks/
Python.framework/Versions/3.6/lib/python3.6/site-packages (from
Kivy-Garden>=0.1.4->Kivy==1.11.0.dev0) (2.20.1)
Requirement already satisfied: certifi>=2017.4.17 in /Library/
Frameworks/Python.framework/Versions/3.6/lib/python3.6/site-
packages (from requests->Kivy-Garden>=0.1.4->Kivy==1.11.0.dev0)
(2018.10.15)
Requirement already satisfied: urllib3<1.25,>=1.21.1 in /
Library/Frameworks/Python.framework/Versions/3.6/lib/python3.6/
site-packages (from requests->Kivy-Garden>=0.1.4-
>Kivy==1.11.0.dev0) (1.24.1)
Requirement already satisfied: chardet<3.1.0,>=3.0.2 in /
Library/Frameworks/Python.framework/Versions/3.6/lib/python3.6/
site-packages (from requests->Kivy-Garden>=0.1.4-
>Kivy==1.11.0.dev0) (3.0.4)
Requirement already satisfied: idna<2.8,>=2.5 in /Library/
Frameworks/Python.framework/Versions/3.6/lib/python3.6/site-
packages (from requests->Kivy-Garden>=0.1.4->Kivy==1.11.0.dev0)
(2.7)
Installing collected packages: docutils, pygments, Kivy
  Running setup.py install for Kivy ... done
Successfully installed Kivy-1.11.0.dev0 docutils-0.14
pygments-2.3.1
>>
```

/usr/local/bin/python3 /Users/ak/Documents/projects/micropython-robot/async-

```
firmware-app/testing/tester-084-086/DriftBuggy08/main.py
```

```
Traceback (most recent call last):
```

```
File "/Users/ak/Documents/projects/micropython-robot/async-firmware-app/testing/tester-084-086/DriftBuggy08/main.py", line 59, in <module>
```

```
from kivy.app import App
```

```
ModuleNotFoundError: No module named 'kivy'
```

Error **No module named 'Cython'**

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ python3.7 -m pip
```

```
install https://github.com/kivy/kivy/archive/master.zip
```

```
Collecting https://github.com/kivy/kivy/archive/master.zip
```

```
Downloading https://github.com/kivy/kivy/archive/master.zip  
- 41.1MB 820kB/s
```

```
Complete output from command python setup.py egg_info:
```

```
Using distutils
```

Cython is missing, it's required for compiling kivy !

```
Traceback (most recent call last):
```

```
File "<string>", line 1, in <module>
```

```
File "/private/var/folders/_n/
```

```
ndycw_zx7kb8gqy9kqwl3mnr0000gn/T/pip-req-build-ino69cab/  
setup.py", line 235, in <module>
```

```
from Cython.Distutils import build_ext
```

```
ModuleNotFoundError: No module named 'Cython'
```

```
-----  
Command "python setup.py egg_info" failed with error code 1 in /  
private/var/folders/_n/ndycw_zx7kb8gqy9kqwl3mnr0000gn/T/pip-req-  
build-ino69cab/
```

**Try..**

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ python3.7 -m pip
```

```
install Cython==0.28.5
```

```
Collecting Cython==0.28.5
```

```
Downloading https://files.pythonhosted.org/packages/e3/bb/  
d43cf512f7ee32653d8e3ae8dbb71f111096a8a16c1176128915de1a3ff5/  
Cython-0.28.5-cp37-cp37m-
```

```
macosx_10_6_intel.macosx_10_9_intel.macosx_10_9_x86_64.macosx_10  
_10_intel.macosx_10_10_x86_64.whl (5.3MB)
```

```
100% |████████████████████████████████████████| 5.3MB 1.2MB/s
```

```
Installing collected packages: Cython
```

```
Successfully installed Cython-0.28.5
```



```
Building wheels for collected packages: Kivy, Kivy-Garden
  Running setup.py bdist_wheel for Kivy ... done
  Stored in directory: /private/var/folders/_n/ndycw_zx7kb8gqy9kqwl3mnr0000gn/T/pip-ephem-wheel-cache-d18pz6si/wheels/56/b0/bf/9a199707fb844ac913813b5254a15c2d2ab74063230d66d27d
  Running setup.py bdist_wheel for Kivy-Garden ... done
  Stored in directory: /Users/ak/Library/Caches/pip/wheels/e5/09/36/4bec048252175b6aa7ba75441cbeed8f31a0bea37abedcfed0
Successfully built Kivy Kivy-Garden
Installing collected packages: urllib3, chardet, idna, certifi, requests, Kivy-Garden, docutils, pygments, Kivy
Successfully installed Kivy-1.11.0.dev0 Kivy-Garden-0.1.4 certifi-2018.11.29 chardet-3.0.4 docutils-0.14 idna-2.8 pygments-2.3.1 requests-2.21.0 urllib3-1.24.1
Arkadiis-MacBook-Pro:kivy-ios-master ak$
```

## Testing ...

```
/usr/local/bin/python3.7 /Users/ak/Documents/projects/micropython-robot/async-firmware-app/testing/tester-084-086/DriftBuggy08/main.py
[WARNING] [Config   ] Older configuration version detected (20 instead of 21)
[WARNING] [Config   ] Upgrading configuration in progress.
[INFO   ] [Logger    ] Record log in /Users/ak/.kivy/logs/kivy_19-01-31_3.txt
[INFO   ] [Kivy      ] v1.11.0.dev0, git-Unknown, 20190131
[INFO   ] [Python    ] v3.7.2 (default, Jan 13 2019, 12:50:15)
[Clang 10.0.0 (clang-1000.11.45.5)]
[INFO   ] [Factory   ] 184 symbols loaded
[INFO   ] [Image     ] Providers: img_tex, img_imageio, img_dds, img_sdl2, img_gif (img_pil, img_ffpyplayer ignored)
[INFO   ] [Text      ] Provider: sdl2(['text_pango'] ignored)
[INFO   ] [Window    ] Provider: sdl2
[INFO   ] [GL        ] Using the "OpenGL ES 2" graphics system
[INFO   ] [GL        ] Backend used <sdl2>
[INFO   ] [GL        ] OpenGL version <b'2.1 NVIDIA-10.4.14 310.90.30.05b27'>
[INFO   ] [GL        ] OpenGL vendor <b'NVIDIA Corporation'>
[INFO   ] [GL        ] OpenGL renderer <b'NVIDIA GeForce GT 330M OpenGL Engine'>
[INFO   ] [GL        ] OpenGL parsed version: 2, 1
[INFO   ] [GL        ] Shading version <b'1.20'>
[INFO   ] [GL        ] Texture max size <8192>
[INFO   ] [GL        ] Texture max units <16>
[INFO   ] [Window    ] auto add sdl2 input provider
[INFO   ] [Window    ] virtual keyboard not allowed, single mode, not docked
```

```
[INFO ] [Base      ] Start application main loop
[INFO ] [GL        ] NPOT texture support is available
[INFO ] [WindowSDL  ] exiting mainloop and closing.
[INFO ] [Base      ] Leaving application in progress...
```

Process finished with exit code 0

**OK**

Error starting at IOS emulator **KeyError: 'kivy.garden.joystick'**

```
2019-01-31 19:00:27.540509+0200 driftbuggy[39589:580734]
libMobileGestalt MobileGestalt.c:890: MGIsDeviceOneOfType is not
supported on this platform.
2019-01-31 19:00:27.763953+0200 driftbuggy[39589:580734]
[framework] CUIThemeStore: No theme registered with id=0
2019-01-31 19:00:27.870853+0200 driftbuggy[39589:580734]
Available orientation: KIVY_ORIENTATION=LandscapeLeft
LandscapeRight Portrait PortraitUpsideDown
2019-01-31 19:00:27.871171+0200 driftbuggy[39589:580734]
Initializing python
/Users/ak/Library/Developer/CoreSimulator/Devices/3F1380AF-
B3D6-4C24-9B11-46134D8C72C3/data/Containers/Bundle/Application/
6868BCC7-BF6C-4E7F-A210-E1EA4C4CEDAA/driftbuggy.app/driftbuggy:
1: DeprecationWarning: the imp module is deprecated in favour of
importlib; see the module's documentation for alternative uses
2019-01-31 19:00:28.176257+0200 driftbuggy[39589:580734] Running
main.py: /Users/ak/Library/Developer/CoreSimulator/Devices/
3F1380AF-B3D6-4C24-9B11-46134D8C72C3/data/Containers/Bundle/
Application/6868BCC7-BF6C-4E7F-A210-E1EA4C4CEDAA/driftbuggy.app/
YourApp/main.pyc
[INFO ] [Kivy      ] v1.10.1
[INFO ] [Python     ] v3.7.1 (default, Jan 31 2019, 00:41:15)
[Clang 10.0.0 (clang-1000.11.45.5)]
[INFO ] [Factory     ] 194 symbols loaded
[INFO ] [Image       ] Providers: img_imageio, img_tex
(img_dds, img_sdl2, img_ffpyplayer, img_pil, img_gif ignored)
Traceback (most recent call last):
  File "/Users/ak/Documents/projects/kivy-ios-master/
driftbuggy-ios/YourApp/main.py", line 62, in <module>
    File "<frozen importlib._bootstrap>", line 983, in
_find_and_load
  File "<frozen importlib._bootstrap>", line 967, in
_find_and_load_unlocked
  File "<frozen importlib._bootstrap>", line 668, in
_load_unlocked
```

```
File "<frozen importlib._bootstrap>", line 640, in
_load_backward_compatible
KeyError: 'kivy.garden.joystick'
2019-01-31 19:00:29.205885+0200 driftbuggy[39589:580734]
Application quit abnormally!
2019-01-31 19:00:29.264237+0200 driftbuggy[39589:580734] Leaving
```

## Working ...

<https://kivy.org/doc/master/api-kivy.garden.html>

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ python3.7 -m pip
install kivy-garden
Requirement already satisfied: kivy-garden in /usr/local/lib/
python3.7/site-packages (0.1.4)
Requirement already satisfied: requests in /usr/local/lib/
python3.7/site-packages (from kivy-garden) (2.21.0)
Requirement already satisfied: chardet<3.1.0,>=3.0.2 in /usr/
local/lib/python3.7/site-packages (from requests->kivy-garden)
(3.0.4)
Requirement already satisfied: idna<2.9,>=2.5 in /usr/local/lib/
python3.7/site-packages (from requests->kivy-garden) (2.8)
Requirement already satisfied: urllib3<1.25,>=1.21.1 in /usr/
local/lib/python3.7/site-packages (from requests->kivy-garden)
(1.24.1)
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/
lib/python3.7/site-packages (from requests->kivy-garden)
(2018.11.29)
>>
```

...

## Its very pity ...

## Try to add Joystick locally

## Added name DriftBuggy driftbuggy

```
Arkadiis-MacBook-Pro:kivy-ios-master ak$ python3 ./toolchain.py
create DriftBuggy /Users/ak/Documents/projects/micropython-
robot/async-firmware-app/testing/tester-084-086/DriftBuggy08
Include dir added: {arch.arch}/freetype
Global: hostpython located at /Users/ak/Documents/projects/kivy-
ios-master/dist/hostpython3/bin/python
Global: hostpgen located at /Users/ak/Documents/projects/kivy-
ios-master/dist/hostpython3/bin/pgen
Include dir added: {arch.arch}/ffi
Include dir added: {arch.arch}/openssl
Include dir added: common/sdl2
Include dir added: common/sdl2_image
Include dir added: common/sdl2_mixer
Include dir added: common/sdl2_ttf
Include dir added: {arch.arch}/freetype
Global: hostpython located at /Users/ak/Documents/projects/kivy-
ios-master/dist/hostpython3/bin/python
Global: hostpgen located at /Users/ak/Documents/projects/kivy-
ios-master/dist/hostpython3/bin/pgen
Include dir added: {arch.arch}/ffi
Include dir added: {arch.arch}/openssl
Include dir added: common/sdl2
Include dir added: common/sdl2_image
Include dir added: common/sdl2_mixer
Include dir added: common/sdl2_ttf
```

-----  
The project need to have:

```
iOS Frameworks: ['OpenGL ES', 'QuartzCore', 'CoreMotion',
'CoreGraphics', 'Metal', 'Accelerate', 'GameController',
'MobileCoreServices', 'ImageIO', 'UIKit', 'AVFoundation',
'AudioToolbox', 'MessageUI']
iOS Libraries: ['libz', 'libc++', 'libbz2', 'libsqlite3']
iOS local Frameworks: []
Libraries: ['/Users/ak/Documents/projects/kivy-ios-master/dist/
lib/libffi.a', '/Users/ak/Documents/projects/kivy-ios-master/
dist/lib/libpython3.a', '/Users/ak/Documents/projects/kivy-ios-
master/dist/lib/libssl.a', '/Users/ak/Documents/projects/kivy-
ios-master/dist/lib/libSDL2_ttf.a', '/Users/ak/Documents/
projects/kivy-ios-master/dist/lib/libSDL2_mixer.a', '/Users/ak/
Documents/projects/kivy-ios-master/dist/lib/libkivy.a', '/Users/
ak/Documents/projects/kivy-ios-master/dist/lib/libcrypto.a', '/
Users/ak/Documents/projects/kivy-ios-master/dist/lib/libSDL2.a',
'/Users/ak/Documents/projects/kivy-ios-master/dist/lib/
```



```
libpyobjus.a', '/Users/ak/Documents/projects/kivy-ios-master/  
dist/lib/libSDL2_image.a', '/Users/ak/Documents/projects/kivy-  
ios-master/dist/lib/libfreetype.a', '/Users/ak/Documents/  
projects/kivy-ios-master/dist/lib/libios.a']  
Sources to link: []
```

---

```
-----  
Analysis of /Users/ak/Documents/projects/kivy-ios-master/  
driftbuggy-ios/driftbuggy.xcodeproj/project.pbxproj  
Ensure OpenGL ES is in the project (pbx_frameworks, system)  
Ensure QuartzCore is in the project (pbx_frameworks, system)  
Ensure CoreMotion is in the project (pbx_frameworks, system)  
Ensure CoreGraphics is in the project (pbx_frameworks, system)  
Ensure Metal is in the project (pbx_frameworks, system)  
Ensure Accelerate is in the project (pbx_frameworks, system)  
Ensure GameController is in the project (pbx_frameworks, system)  
Ensure MobileCoreServices is in the project (pbx_frameworks,  
system)  
Ensure ImageIO is in the project (pbx_frameworks, system)  
Ensure UIKit is in the project (pbx_frameworks, system)  
Ensure AVFoundation is in the project (pbx_frameworks, system)  
Ensure AudioToolbox is in the project (pbx_frameworks, system)  
Ensure MessageUI is in the project (pbx_frameworks, system)  
Ensure libz is in the project (pbx_libraries, dylib+tbd)  
Ensure libc++ is in the project (pbx_libraries, dylib+tbd)  
Ensure libbz2 is in the project (pbx_libraries, dylib+tbd)  
Ensure libsqlite3 is in the project (pbx_libraries, dylib+tbd)  
Ensure /Users/ak/Documents/projects/kivy-ios-master/dist/lib/  
libffi.a is in the project (libraries)  
Ensure /Users/ak/Documents/projects/kivy-ios-master/dist/lib/  
libpython3.a is in the project (libraries)  
Ensure /Users/ak/Documents/projects/kivy-ios-master/dist/lib/  
libssl.a is in the project (libraries)  
Ensure /Users/ak/Documents/projects/kivy-ios-master/dist/lib/  
libSDL2_ttf.a is in the project (libraries)  
Ensure /Users/ak/Documents/projects/kivy-ios-master/dist/lib/  
libSDL2_mixer.a is in the project (libraries)  
Ensure /Users/ak/Documents/projects/kivy-ios-master/dist/lib/  
libkivy.a is in the project (libraries)  
Ensure /Users/ak/Documents/projects/kivy-ios-master/dist/lib/  
libcrypto.a is in the project (libraries)  
Ensure /Users/ak/Documents/projects/kivy-ios-master/dist/lib/  
libSDL2.a is in the project (libraries)  
Ensure /Users/ak/Documents/projects/kivy-ios-master/dist/lib/  
libpyobjus.a is in the project (libraries)  
Ensure /Users/ak/Documents/projects/kivy-ios-master/dist/lib/  
libSDL2_image.a is in the project (libraries)
```



Ensure /Users/ak/Documents/projects/kivy-ios-master/dist/lib/libfreetype.a is in the project (libraries)  
Ensure /Users/ak/Documents/projects/kivy-ios-master/dist/lib/libios.a is in the project (libraries)

--

Project directory : driftbuggy-ios  
XCode project : driftbuggy-ios/driftbuggy.xcodeproj

**Error while importing modules** `ModuleNotFoundError: No module named 'module_in_home_directory'`

<https://github.com/kivy/kivy-ios/issues/320>

Solution:

```
import sys
sys.path.append("_applibs")
sys.path.append(".")
```

Another (not tested yet) <http://www.albertgao.xyz/2017/05/22/how-to-get-current-app-folder-in-kivy/>

**Errors while importing modules. And/or kivy ios**  
**kivy.factory.FactoryException: Unknown class,**  
**Error ModuleNotFoundError: No module named '\_\_main\_\_.demo';**  
**'\_\_main\_\_' is not a package**

**Solution:**

drop the .

<https://stackoverflow.com/questions/46125196/kivy-error-raise-factoryexceptionunknown-class-s-name>

[async-firmware-app/testing/tester-084-086/DriftBuggy08/main.py](#)

```
import sys
sys.path.append("_applibs")
sys.path.append(".")

from kivy.app import App

from kivy.uix.widget import Widget
# from kivy.garden.joystick import Joystick
# from jstk.joystick import Joystick
```

```
# from joystick import Joystick
# from jstck import JoystickPad
# from jstck import Joystick
from joystick import Joystick
from joystickpad import JoystickPad
```

**Error – Joystick is NOT visible**  
**Solution:**

**Use Builder INSTEAD of .KV file**

**async-firmware-app/testing/tester-084-086/DriftBuggy08/  
joystick.py**

```
from kivy.lang import Builder

Builder.load_string('''
<JoyStick>:
    canvas:

        ### Outer Background ###
        Color:
            rgba: self.outer_background_color
        Ellipse:
            pos: (self.center_x - self._outer_radius),
            (self.center_y - self._outer_radius)
            size: (self._outer_diameter, self._outer_diameter)

        ### Outer Border ###
        Color:
            rgba: self.outer_line_color
        Line:
            circle: (self.center_x, self.center_y,
            (self._outer_radius - (self._outer_line_width / 2)))
            width: self._outer_line_width

        ### Inner Background ###
        Color:
            rgba: self.inner_background_color
        Ellipse:
            pos: (self.center_x - self._inner_radius),
            (self.center_y - self._inner_radius)
            size: (self._inner_diameter, self._inner_diameter)

        ### Inner Border ###
        Color:
```

```

        rgba: self.inner_line_color
    Line:
        circle: (self.center_x, self.center_y,
self._inner_radius)
        width: self._inner_line_width

    ### Pad ###
    JoystickPad:
        id: pad
'''
)

```

async-firmware-app/testing/tester-084-086/DriftBuggy08/  
joystickpad.py:

```

from kivy.lang import Builder

Builder.load_string('''
<JoystickPad>:
    id: pad
    canvas:

        ### Background ###
        Color:
            rgba: self._background_color
        Ellipse:
            pos: (self.center_x - self._radius), (self.center_y
- self._radius)
            size: (self._diameter, self._diameter)

        ### Border ###
        Color:
            rgba: self._line_color
        Line:
            circle: (self.center_x, self.center_y,
(self._diameter - (self._line_width * 2)) / 2)
            width: self._line_width
''')

```

Actual working **files**

```

Arkadiis-MacBook-Pro:DriftBuggy08 ak$ ls
__init__.py          joystickpad.kv        libs
touchdata.py
joystick.kv          joystickpad.py       main-kivy-buggy-

```

(0.8.6.1).py

joystick.py

jstk

main.py

## Images and icons

Replace

Arkadiis-MacBook-Pro:DriftBuggy08 ak\$ cd /Users/ak/Documents/  
projects/kivy-ios-master/driftbuggy-ios

Arkadiis-MacBook-Pro:driftbuggy-ios ak\$ ls -al

total 104

drwxr-xr-x	12	ak	staff	384	Feb	3	22:59	.
drwxr-xr-x@	18	ak	staff	576	Feb	2	14:39	..
-rw-r--r--@	1	ak	staff	8196	Feb	3	23:02	.DS_Store
drwxr-xr-x	14	ak	staff	448	Feb	3	23:02	LaunchImages
drwxr-xr-x	13	ak	staff	416	Feb	3	23:07	YourApp
-rwxr-xr-x	1	ak	staff	517	Feb	2	20:53	bridge.h
-rwxr-xr-x	1	ak	staff	1774	Feb	2	20:53	bridge.m
drwxr-xr-x	4	ak	staff	128	Feb	3	22:56	driftbuggy
-rwxr-xr-x@	1	ak	staff	1334	Feb	3	19:54	driftbuggy-
Info.plist								
drwxr-xr-x@	6	ak	staff	192	Feb	3	22:22	
driftbuggy.xcodeproj								
-rw-r--r--@	1	ak	staff	18194	Feb	3	22:35	icon.png
-rwxr-xr-x@	1	ak	staff	7228	Feb	2	20:53	main.m

And

Arkadiis-MacBook-Pro:driftbuggy-ios ak\$ cd LaunchImages/

Arkadiis-MacBook-Pro:LaunchImages ak\$ ls -al

total 19672

drwxr-xr-x	14	ak	staff	448	Feb	3	23:02	.
drwxr-xr-x	12	ak	staff	384	Feb	3	22:59	..
-rw-r--r--@	1	ak	staff	1148624	Feb	3	22:41	
Default-568h@2x.png								
-rw-r--r--@	1	ak	staff	1466479	Feb	3	23:00	
Default-667h@2x.png								
-rwxr-xr-x@	1	ak	staff	8054	Feb	2	20:53	
Default-763h@3x.png								
-rw-r--r--@	1	ak	staff	1229772	Feb	3	22:48	Default-
Landscape.png								
-rw-r--r--@	1	ak	staff	3622254	Feb	3	22:50	Default-
Landscape@2x.png								
-rw-r--r--@	1	ak	staff	1204732	Feb	3	22:52	Default-
Portrait.png								
-rwxr-xr-x@	1	ak	staff	9239	Feb	2	20:53	Default-

```

Portrait@2x~ipad.png
-rwxr-xr-x@ 1 ak staff 20682 Feb 2 20:53 Default-
Portrait@3x~ipad.png
-rw-r--r--@ 1 ak staff 314725 Feb 3 22:54 Default.png
-rw-r--r--@ 1 ak staff 994100 Feb 3 22:55 Default@2x.png
-rwxr-xr-x@ 1 ak staff 4099 Feb 2 20:53 Default@3x.png
-rw-r--r--@ 1 ak staff 18194 Feb 3 22:35 icon.png

```

Be Happy and have a beer :)