

# Install OpenGL in Unix-based OS

# Linux(Ubuntu 16.04) - install

- ▶ Run the commands below:
- ▶ `sudo apt-get update`
- ▶ `sudo apt-get upgrade`
- ▶ `sudo apt-get install build-essential`
- ▶ `sudo apt-get install libgl1-mesa-dev`
- ▶ `sudo apt-get install libglu1-mesa-dev`
- ▶ `sudo apt-get install freeglut3-dev`

# Linux(Ubuntu 16.04) - compile

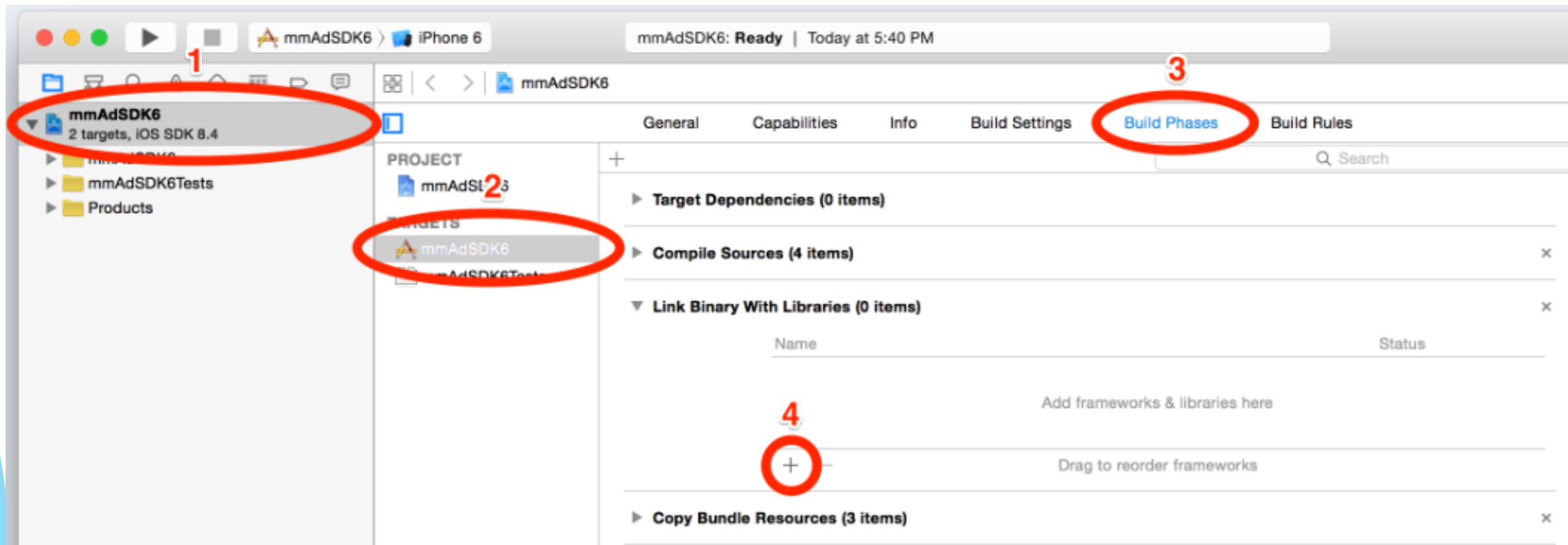
- ▶ Include glut.h in your code:
- ▶ `#include <GL/glut.h>`
- ▶ Compile your code, linked with GL GLU glut
- ▶ `g++ <your source code> -o <output> -lGL -lGLU -lglut`

# MacOS (1)

- ▶ According to the link below:  
[https://en.wikibooks.org/wiki/OpenGL\\_Programming/Installation/Mac](https://en.wikibooks.org/wiki/OpenGL_Programming/Installation/Mac)
- ▶ To use GLUT and OpenGL from within Xcode:
  - ▶ Open **Xcode** located in `/Developer/Applications/`
  - ▶ Choose **"New Project"** from the file menu
  - ▶ Choose **"Command Line Tool"** under the Application template for Mac OS X
  - ▶ Choose type **"C++"**
  - ▶ Enter your desired project name and directory and click create

# MacOS (2)

- ▶ According to the link below:
- ▶ <http://docs.onemobilesdk.aol.com/ios-ad-sdk/adding-frameworks-xcode.html>
- ▶ In the "Linked Frameworks and Libraries" area click the "+" button,
  - ▶ Add "OpenGL.framework"
  - ▶ Add "GLUT.framework"



# MacOS (3)

- ▶ Include glut.h only
- ▶ `#include <GLUT/glut.h>`
- ▶ Press “run” button