

 README.md

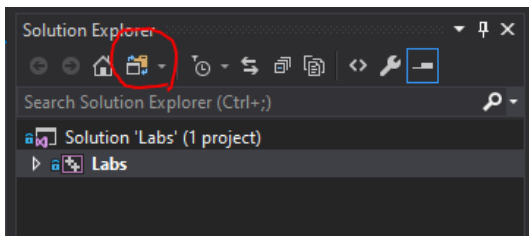
## COMP371-Project

Git Repository for the project

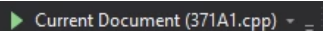
## Windows

### Building with VisualStudio 2017




0. When installing VS2017, make sure that you include the installation of the Windows SDK version 10.0.16299.0
1. Start VisualStudio 2017, open the .sln file in `vs2017` folder.
2. In the 'Solution Explorer' click the 'Solutions and Folders' button so that you can see all the folders/files.



3. Click the `Main.cpp` inside the `Source` folder.
4. You should see the `Local Windows Debugger` button at the top, clicking this should build the project and launch the executable. If you don't see this option or it doesn't work, continue with the steps below:
5. Click the dropdown next to the green arrow at the top, make sure it has 'Current Document (Main.cpp)' selected.

A screenshot of a dropdown menu in Visual Studio. It shows a green play button icon followed by the text 'Current Document (371A1.cpp)'.

6. If you already built the project before, delete the executable `COMP371-Project/Bin/Labs-Debug`

 Labs-Debug	2020-07-05 11:43 PM	Application	696 KB
 Labs-Debug.ilk	2020-07-05 11:43 PM	Incremental Linke...	2,629 KB
 Labs-Debug.pdb	2020-07-05 11:43 PM	Program Debug D...	2,300 KB

7. Click the green arrow to build and launch the code.

NOTE: The automatic running of the executable may not work (error message contains: "Unable to start program...").

Microsoft Visual Studio

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Unable to start program

'C:\Users\Peter\Documents\COMP371\COMP371-Project\VS2017\Bin\Labs-Debug.exe'.

'C:\Users\Peter\Documents\COMP371\COMP371-Project\VS2017\Bin' is not a valid working directory.

OK

If the above steps do not result in a new window popping up to render the graphics, then navigate to and run the newly generated executable `COMP371-Project/Bin/Labs-Debug` by double clicking it.

## Linux

## To compile from the CLI

1. `cd COMP371-Project/Source`
2. `make`

## Controls

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### Keyboard inputs

- `w` --> walk forward
- `a` --> walk left
- `s` --> walk backward
- `d` --> walk right
- `u` --> scale up model
- `j` --> scale down model
- `home` --> set world orientation to home position
- Left Mouse Click + Move Mouse up/down --> Zoom out/in
- Right Mouse Click + Move Mouse left/right --> Pan
- Middle Mouse Click + Move Mouse up/down --> Tilt
- `1` --> switch to player camera
- `2` --> switch to world camera
- `l` --> switch to lines rendering mode
- `p` --> switch to points rendering mode
- `t` --> switch to triangles rendering mode
- `b` --> toggle light and shadow rendering
- `x` --> toggle texture rendering
- `Esc` --> terminate program

### To run MangoHud

`MANGOHUD_DLSYM=1 mangohud ./exec`

## Credits

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- [Light code, shadows, skybox](#)
- [Noise library FastNoise \(MIT\)](#)
- [bark texture](#)
- [box texture](#)
- [wood texture](#)
- [rock texture](#)
- [leaves texture](#)
- [log texture](#)

- [dark log texture](#)
- [door texture](#)
- [window texture](#)
- [snow texture](#)
- [grass texture](#)
- [penguin black fur texture](#)
- [penguin white fur texture](#)
- [penguin orange beak texture](#)
- [penguin pearl white sclera texture](#)
- [penguin pitch black pupil texture](#)