



Installation Description

***All installations can be done on Linux or on WSL2**

Installing GHCup

Go to: <https://www.haskell.org/ghcup/install/#installation>

Linux

```
# install curl
$ sudo apt-get install curl

# install haskell with ghcup compiler
curl --proto 'https' --tlsv1.2 -sSf https://get-ghcup.haskell.org | sh
```

Several questions are asked. Always enter the left answer.

Creating a project with the new cabal version

Follow this: <https://cabal.readthedocs.io/en/3.6/getting-started.html>

To get the ability to use the new packet manager, we have to create a project with the new work-around.

```
$ mkdir FP-Project
$ cd FP-Project
$ cabal init -n # -n = non-interactive
```

Run executive

```
$ cabal run FP-Project # output: Hello, Haskell!

# if cabal asking for re(building) then
$ cabal build FP-Project
```

Add project dependencies

Add this into your FP-Project.cabal file & change the second line with your project name

FP-Project.cabal

Go to your terminal and run:

```
# cabal will update their own dependencies
cabal update

# cabal will download and install your project dependencies
cabal run
```

Run the current project state

Add this code into your app/Main.hs to use our prepared code:

Main.hs

```
# Finally run
cabal run
```

Debugging & Troubleshooting

1. It is possible that no GCC compiler is installed on your new machine.

```
# install gcc compiler
sudo apt-get install build-essential
```

2. In the following problem case: cabal run

```
# output of cabal run
Build profile: -w ghc-8.10.7 -O1
In order, the following will be built (use -v for more details):
 - FP-Project-0.1.0.0 (exe:FP-Project) (first run)
Preprocessing executable 'FP-Project' for FP-Project-0.1.0.0..
Building executable 'FP-Project' for FP-Project-0.1.0.0..
Linking /home/majbrit/Haskell/FP-Project/dist-newstyle/build/x86_64-linux/ghc-8.10.7/FP-Project-0.1.0.0/x/FP-Project/build/FP-Project/FP
/usr/bin/ld.gold: error: cannot find -lgmp
collect2: error: ld returned 1 exit status
`gcc' failed in phase `Linker'. (Exit code: 1)

# solution
sudo apt-get update
sudo apt-get install ghc ghc-prof ghc-doc
```

3. Another error at: cabal run

```
# parts of output cabal run
Failed to build zlib-0.6.2.3. The failure occurred during the configure step.

Configuring library for zlib-0.6.2.3..
cabal-3.6.2.0: Missing dependency on a foreign library:
* Missing (or bad) header file: zlib.h
* Missing (or bad) C library: z

cabal: Failed to build zlib-0.6.2.3 (which is required by exe:learn-a-haskell
from FP-Project-0.1.0.0). See the build log above for details.

# solution
sudo apt-get install zlib1g-dev
```

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