Bridge of Life Education

Catapult Setup Guide(NTHU)

Jiin Lai

Catapult

High-level synthesis (HLS) creates RTL implementations from abstract specifications described with C / C++.

Tool setup

- You need to setup Catapult and Questasim in IC lab account.
  - Run “run_catapult” to check the tool is correctly installed.
- You also need to setup the directory of some environment variables to run up our sample code.
  - Run “lab1_fir” to check the environment variables is setup correctly.
  - You may need to create “bin” folder to save execution file.
- TA will give you another tool setup guide for tool setup.

Setup Catapult HLS and QuestaSim

- Add the following source file in .tcshrc

Catapult HLS	2023.1	source /usr/cadtool/user_setup/05-catapult.csh		catapult
Questa_Sim	2021.1	source /usr/cadtool/user_setup/05-questasim.csh		

```
source /usr/cadtool/user_setup/05-catapult.csh
source /usr/cadtool/user_setup/05-questasim.csh
```

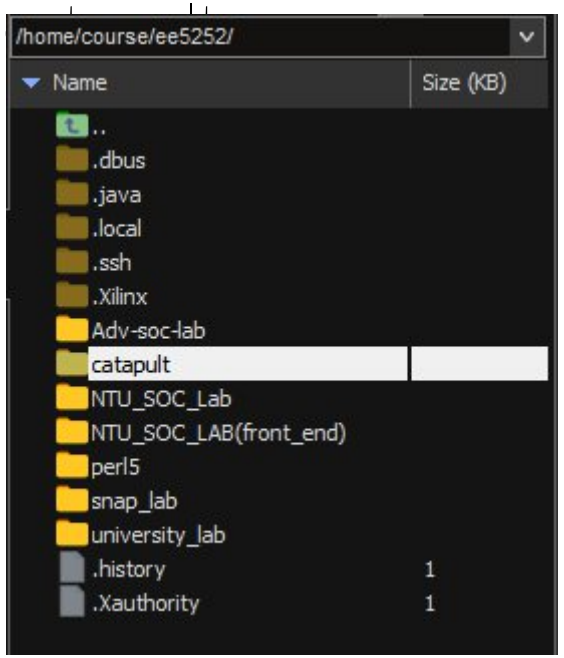
Add the environment variable

- Add the following command file in .tcshrc

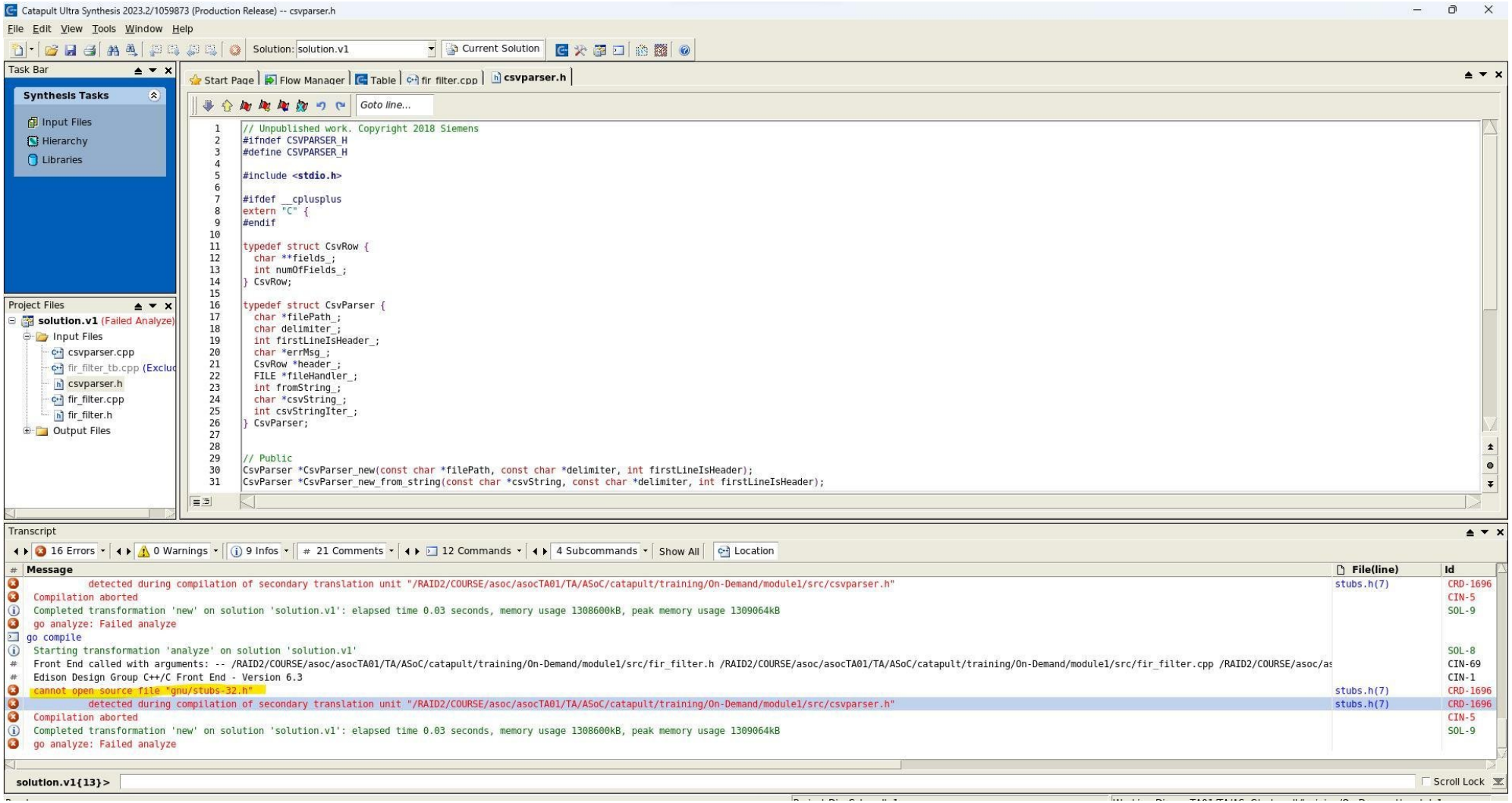
```
echo "Catapult setup"
setenv MGC_HOME /usr/cadtool/mentor/Catapult/2023.1/Mgc_home
setenv CXX_HOME $MGC_HOME
setenv SYSTEMC_INCDIR $MGC_HOME/shared/include
setenv SYSTEMC_LIBDIR $MGC_HOME/shared/lib
setenv LD_LIBRARY_PATH $SYSTEMC_LIBDIR
setenv LD_LIBRARY_PATH ${MGC_HOME}/lib:$LD_LIBRARY_PATH
echo "QuestaSim setup"
setenv MODEL_TECH /usr/cadtool/mentor/Questa_Sim/2021.1_1/questasim/bin
setenv QUESTA_HOME /usr/cadtool/mentor/Questa_Sim/2021.1_1/questasim
```

Lab file access

- For NTHU student, you can access the file in the following directory
  - /home/course/ee5252/



Error: cannot open source file "gnu/stubs-32.h"

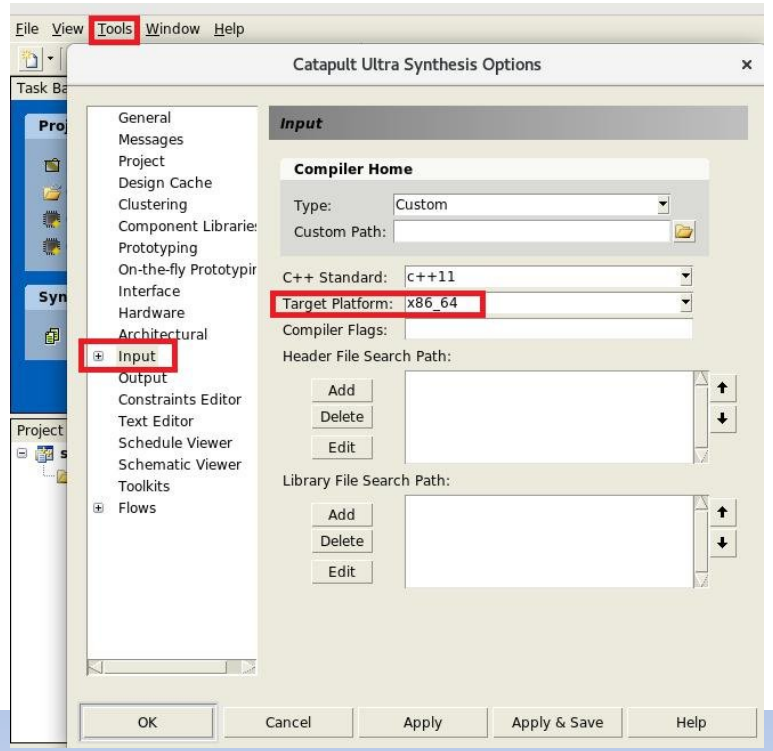


Probable solution:

- Install glibc-devel.i686 tool
- You can check the server has installed the tool or not.
- However, it needs root permission to install this tool.

Probable solution:

- Set tools in Catapult GUI
- Set target platform of input (x86_64)
- In NYCU ICLab server, it doesn't work.



Probable solution:

- Type the command in Catapult GUI
- Options set Input/TargetPlatform x86_64
- It works in NYCU ICLab server