

# 협업을 위한 Git Fork 프로세스

2025.08.06

한국전자통신연구원

박미정, 장형욱, 한규승, 임인기, 강태욱, 김혁, 박형일, 이재진

# Fork 개념

- 포크(Fork)는 GitHub에서 다른 사용자의 저장소(레포지토리)를 자신의 계정으로 복사하는 과정을 말합니다.



예시) <https://github.com/rvx-etri/rvx-tutorials.git>

예시) <https://github.com/본인계정>  
[https://github.com/doyulmom/rvx\\_tutorial\\_mj2.git](https://github.com/doyulmom/rvx_tutorial_mj2.git)

# Git fork 1

git clone --recursive [https://github.com/doyulmom/rvx\\_tutorial\\_mj2.git](https://github.com/doyulmom/rvx_tutorial_mj2.git) <== 내 저장소  
(readme 파일이라도 생성해야함)

git clone --recursive <https://github.com/rvx-etri/rvx-tutorials.git> <= 기존 원본저장소  
cd rvx-tutorials

```
mj@mj-940XGK: ~/rvx_tutorial_mj2
Receiving objects: 100% (624/624), 13.90 MiB | 12.80 MiB/s, done.
Resolving deltas: 100% (403/403), done.
mj@mj-940XGK:~$ git clone --recursive https://github.com/rvx-etri/rvx-tutorials.git
Cloning into 'rvx-tutorials'...
remote: Enumerating objects: 45, done.
remote: Counting objects: 100% (14/14), done.
remote: Compressing objects: 100% (11/11), done.
remote: Total 45 (delta 3), reused 11 (delta 3), pack-reused 31 (from 1)
Receiving objects: 100% (45/45), 58.60 MiB | 17.46 MiB/s, done.
Resolving deltas: 100% (7/7), done.
Submodule 'rvx_init' (https://github.com/rvx-etri/rvx_init.git) registered for path 'rvx_init'
Submodule 'rvx_install' (https://github.com/rvx-etri/rvx_install.git) registered for path 'rvx_install'
Cloning into '/home/mj/rvx-tutorials/rvx_init'...
remote: Enumerating objects: 272, done.
remote: Counting objects: 100% (272/272), done.
remote: Compressing objects: 100% (115/115), done.
remote: Total 272 (delta 162), reused 265 (delta 155), pack-reused 0 (from 0)
Receiving objects: 100% (272/272), 34.04 KiB | 17.02 MiB/s, done.
Resolving deltas: 100% (162/162), done.
Cloning into '/home/mj/rvx-tutorials/rvx_install'...
remote: Enumerating objects: 624, done.
remote: Counting objects: 100% (624/624), done.
remote: Compressing objects: 100% (217/217), done.
remote: Total 624 (delta 403), reused 610 (delta 389), pack-reused 0 (from 0)
Receiving objects: 100% (624/624), 13.90 MiB | 7.74 MiB/s, done.
Resolving deltas: 100% (403/403), done.
Submodule path 'rvx_init': checked out '7ffcc5450e16cf5aa541394cccf16b0538d4014f'
Submodule path 'rvx_install': checked out '5cfa02fb9fd3f7cf84cbddab88f4a60ac1af23c8'
mj@mj-940XGK:~$ cd rvx-tutorials/
mj@mj-940XGK:~/rvx-tutorials$ ls
```

# Git fork 2

```
mj@mj-940XGK: ~/rvx_tutorial_mj2
Resolving deltas: 100% (403/403), done.
Submodule path 'rvx_init': checked out '7ffcc5450e16cf5aa541394cccf16b0538d4014f'
Submodule path 'rvx_install': checked out '5cfa02fb9fd3f7cf84cbddab88f4a60ac1af23c8'
mj@mj-940XGK:~/rvx-tutorials$ cd rvx-tutorials/
mj@mj-940XGK:~/rvx-tutorials$ ls
imp_class_info  platform  rvx_config.mh  rvx_init.mh  sync
Makefile        README.md  rvx_init      rvx_install  this_repo_is_frozen
mj@mj-940XGK:~/rvx-tutorials$ git submodule init
mj@mj-940XGK:~/rvx-tutorials$ git submodule update
mj@mj-940XGK:~/rvx-tutorials$ ls
imp_class_info  platform  rvx_config.mh  rvx_init.mh  sync
Makefile        README.md  rvx_init      rvx_install  this_repo_is_frozen
mj@mj-940XGK:~/rvx-tutorials$ make config_python
mj@mj-940XGK:~/rvx-tutorials$ ls
imp_class_info  README.md  rvx_init.mh  sync
Makefile        rvx_config.mh  rvx_install  this_repo_is_frozen
platform        rvx_init      rvx_python_config.mh
mj@mj-940XGK:~/rvx-tutorials$ gedit rvx_python_config.mh
mj@mj-940XGK:~/rvx-tutorials$ make check_python
// You MUST use the version between 3.8 and 3.10. //
from /home/mj/rvx-tutorials/rvx_python_config.mh
PYTHON3_CMD=/usr/local/bin/python3
Python 3.9.18
mj@mj-940XGK:~/rvx-tutorials$ make check_pip
PIP3_CMD=/usr/local/bin/python3 -m pip
pip 25.1.1 from /home/mj/.local/lib/python3.9/site-packages/pip (python 3.9)
mj@mj-940XGK:~/rvx-tutorials$ make prepare
Do you want store sudo info? (bool) : yes
Are you registered as nopasswd sudoer? (bool) : no
Sudo password :
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
gnome-terminal is already the newest version (3.52.0-1ubuntu2).
```

```
rvx_python_config.mh
~/rvx-tutorials
1 PYTHON3_CMD=/usr/local/bin/python3 /usr/bin/python3 /bin/python3
```

↓

```
rvx_python_config.mh
~/rvx-tutorials
1 PYTHON3_CMD=/usr/local/bin/python3
```

- >cd rvx-tutorials
- >git submodule init
- > git submodule update
- > make config\_python → rvx\_python\_config.mh 파일 생기고 python 경로 확인/조정.
- > gedit rvx\_python\_config.mh => 파일 내용중 경로 여러 개이면 하나만 남기고 지움(위그림참조)
- > make check\_python
- > make check\_pip
- > make prepare = > rvx\_setup.sh 파일 생성 → yes/no/computer password

# Git fork 3

```
mj@mj-940XGK: ~/rvx_tutorial_mj2
reading state information... done
sshpas is already the newest version (1.09-1).
0 upgraded, 0 newly installed, 0 to remove and 239 not upgraded.

mj@mj-940XGK:~/rvx-tutorials$ make check

## git check ##
git version 2.43.0

## make check ##
GNU Make 4.3
Built for x86_64-pc-linux-gnu
Copyright (C) 1988-2020 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

## python check ##
make[1]: Entering directory '/home/mj/rvx-tutorials'
// You MUST use the version between 3.8 and 3.10. //
from /home/mj/rvx-tutorials/rvx_python_config.mh
PYTHON3_CMD=/usr/local/bin/python3
Python 3.9.18
make[1]: Leaving directory '/home/mj/rvx-tutorials'

## python package check ##
['Name: distro', 'Version: 1.9.0']
['Name: numpy', 'Version: 2.0.2']
['Name: cryptography', 'Version: 44.0.3']
['Name: pyelftools', 'Version: 0.32']
['Name: configparser', 'Version: 7.2.0']

## Linux locale check ##
LANG=en_US.UTF-8
LANGUAGE=
```

> make check → Check which installation process has issues

# Git fork 4

```
mj@mj-940XGK: ~/rvx_tutorial_mj2
## RVX version ##
/home/mj/rvx-tutorials
2025-07-14-09-54_fc2cb49_stable

mj@mj-940XGK:~/rvx-tutorials$ gedit Makefile
mj@mj-940XGK:~/rvx-tutorials$ ls
imp_class_info  rvx_config.mh  rvx_install  this_repo_is_frozen
Makefile       rvx_engine.log rvx_python_config.mh  update.sh
platform       rvx_init       rvx_setup.sh
README.md      rvx_init.mh    sync
mj@mj-940XGK:~/rvx-tutorials$ . rvx_setup.sh
mj@mj-940XGK:~/rvx-tutorials$ ls
imp_class_info  rvx_config.mh  rvx_install  this_repo_is_frozen
Makefile       rvx_engine.log rvx_python_config.mh  update.sh
platform       rvx_init       rvx_setup.sh
README.md      rvx_init.mh    sync
mj@mj-940XGK:~/rvx-tutorials$ make activate
[oed]
Downloaded
[minicom]
[telnet]
[gui]
Downloaded
Activate Success: Reopen the terminal
mj@mj-940XGK:~/rvx-tutorials$ ls
imp_class_info  rvx_binary  rvx_init.mh  rvx_util
local_setup    rvx_config.mh  rvx_install  sync
Makefile       rvx_devkit   rvx_python_config.mh  this_repo_is_frozen
manual         rvx_engine.log  rvx_setup.sh  update.sh
platform       rvx_hwlib    rvx_ssw
README.md      rvx_init     rvx_synthesizer_obfuscated
mj@mj-940XGK:~/rvx-tutorials$ . rvx_setup.sh
mj@mj-940XGK:~/rvx-tutorials$ git config --global protocol.file.allow always
mj@mj-940XGK:~/rvx-tutorials$ make fork TARGET=/home/mj/rvx_tutorial_mj2/
```

- > source /home/mj/rvx\_tutorial\_mj2/rvx\_setup.sh  
또는 > . rvx\_setup.sh
- > make activate → This step activates RVX functionality by installing the RVX components.
- > . rvx\_setup.sh
- > git config --global protocol.file.allow always
- > make fork TARGET=/home/mj/rvx\_tutorial\_mj2/

# Git fork 5

```
mj@mj-940XGK: ~/rvx_tutorial_mj2
mj@mj-940XGK:~/rvx-tutorials$ make fork TARGET=/home/mj/rvx_tutorial_mj2/
"/home/mj/rvx-tutorials" is forked to "/home/mj/rvx_tutorial_mj2"
mj@mj-940XGK:~/rvx-tutorials$ ls
imp_class_info  rvx_binary      rvx_init.mh      rvx_util
local_setup    rvx_config.mh   rvx_install      sync
Makefile       rvx_devkit      rvx_python_config.mh  this_repo_is_frozen
manual         rvx_engine.log  rvx_setup.sh     update.sh
platform       rvx_hwlib       rvx_ssw
README.md      rvx_init        rvx_synthesizer_obfuscated
mj@mj-940XGK:~/rvx-tutorials$ cd ../rvx_tutorial_mj2/
mj@mj-940XGK:~/rvx_tutorial_mj2$ ls
imp_class_info  rvx_config.mh   rvx_install      this_repo_is_frozen
Makefile       rvx_init        rvx_python_config.mh
platform       rvx_init.mh     sync
mj@mj-940XGK:~/rvx_tutorial_mj2$ gedit rvx_python_config.mh
mj@mj-940XGK:~/rvx_tutorial_mj2$ make prepare
Do you want store sudo info? (bool) : yes
Are you registered as nopasswd sudoer? (bool) : no
Sudo password :
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
gnome-terminal is already the newest version (3.52.0-1ubuntu2).
0 upgraded, 0 newly installed, 0 to remove and 239 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
sshpas is already the newest version (1.09-1).
0 upgraded, 0 newly installed, 0 to remove and 239 not upgraded.
mj@mj-940XGK:~/rvx_tutorial_mj2$ ls
imp_class_info  rvx_engine.log  rvx_python_config.mh  update.sh
Makefile       rvx_init        rvx_setup.sh
```

- > cd /home/mj/rvx\_tutorial\_mj2
- > make prepare → yes/no/password 기술 (rvx\_setup.sh 생성, bashrc에 source 등록 뒷장에 기술)
- > make activate

# Git fork 6

```
mj@mj-940XGK: ~/rvx_tutorial_mj2
platform      rvx_init.mh      sync
rvx_config.mh  rvx_install      this_repo_is_frozen
mj@mj-940XGK:~/rvx_tutorial_mj2$ . rvx_setup.sh
mj@mj-940XGK:~/rvx_tutorial_mj2$ ls
imp_class_info  rvx_engine.log  rvx_python_config.mh  update.sh
Makefile        rvx_init        rvx_setup.sh
platform        rvx_init.mh     sync
rvx_config.mh   rvx_install     this_repo_is_frozen
mj@mj-940XGK:~/rvx_tutorial_mj2$ make activate
[oed]
Downloaded
[minicom]
[telnet]
[gui]
Downloaded
Activate Success: Reopen the terminal
```

> . rvx\_setup.sh  
> make activate



# 새로운 플랫폼 만들기 1

<https://riscvexpress.github.io/rvx-cli-manual-en-platform.html>

## RISC-V eXpress CLI Manual for Linux/Windows - Platform -

Kyuseung Han, Sukho Lee, Jae-Jin Lee  
ETRI, Daejeon, South Korea

v2025-07-10 or later

```
mj@mj-940XGK: ~/rvx_tutorial_mj2/platform/test_prj_mj2/imp_genesys2_...
mj@mj-940XGK:~/rvx_tutorial_mj2/platform$ cd ../
mj@mj-940XGK:~/rvx_tutorial_mj2$ . rvx_setup.sh
mj@mj-940XGK:~/rvx_tutorial_mj2$ cd platform/
mj@mj-940XGK:~/rvx_tutorial_mj2/platform$ ls
Makefile rvx_engine.log test_prj_mj tip_hello
mj@mj-940XGK:~/rvx_tutorial_mj2/platform$ make new PLATFORM_NAME=test_prj_mj2
mj@mj-940XGK:~/rvx_tutorial_mj2/platform$ ls
Makefile rvx_engine.log test_prj_mj test_prj_mj2 tip_hello
mj@mj-940XGK:~/rvx_tutorial_mj2/platform$ cd test_prj_mj2/
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ ls
app Makefile
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ cp ../test_prj_mj/test_prj_mj.xml /test_prj_mj2.xml
cp: cannot create regular file '/test_prj_mj2.xml': Permission denied
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ cp ../test_prj_mj/test_prj_mj.xml ./test_prj_mj2.xml
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ ls
app Makefile test_prj_mj2.xml
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ gedit test_prj_mj2.xml

mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ make rvx_each
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ ls
app Makefile rvx_each.mh test_prj_mj2.xml
```

- > make new PLATFORM\_NAME=test\_prj\_mj2
- > ls
- > cd test\_prj\_mj2/
- > ls → xml 파일이 있는지 확인 없으면 복사
- > cp ../test\_prj\_mj/test\_prj\_mj.xml ./test\_prj\_mj2.xml
- > gedit test\_prj\_mj2.xml
- .xml 파일을 열어 명칭 수정 (뒷장)
- > make rvx\_each : rvx\_each.mh 파일 생성

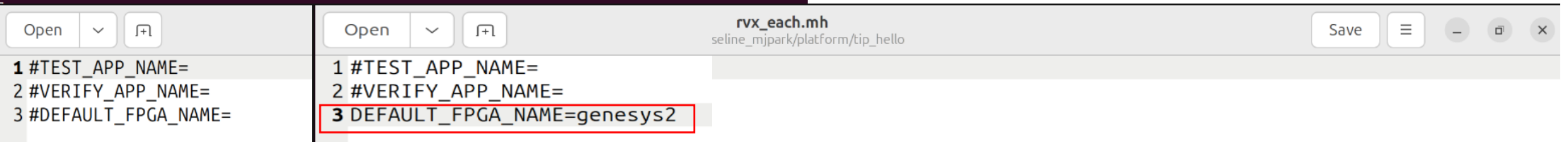
# test\_prj\_mj2.xml

```
1 <?xml version="1.0" ?>
2 <rvx>
3     <platform>
4         <name>test_prj_mj2</name>
5         <status>described</status>
6         <spec>
7             <define>
8                 <name>sram_size</name>
9                 <value>128kB</value>
10            </define>
11        </spec>
12
13        <ip_instance>
14            <name>i_main_core</name>
15            <library_name>rvc_orca</library_name>
16        </ip_instance>
17    </platform>
18 </rvx>
```

# 새로운 플랫폼 만들기 2

```
mj@mj-940XGK: ~/rvx_tutorial_mj2/platform/test_prj_mj2/imp_genesys2_...
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ ls
app Makefile rvx_each.mh test_prj_mj2.xml
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ gedit rvx_each.mh
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ make syn
Library file : /home/mj/rvx_tutorial_mj2/rvx_synthesizer_obfuscated/interface/ah
b.xml
Library file : /home/mj/rvx_tutorial_mj2/rvx_synthesizer_obfuscated/interface/ai
oif.xml
Library file : /home/mj/rvx_tutorial_mj2/rvx_synthesizer_obfuscated/interface/ap
b.xml
Library file : /home/mj/rvx_tutorial_mj2/rvx_synthesizer_obfuscated/interface/ax
i.xml
Library file : /home/mj/rvx_tutorial_mj2/rvx_synthesizer_obfuscated/interface/ax
i4.xml
Library file : /home/mj/rvx_tutorial_mj2/rvx_synthesizer_obfuscated/interface/ax
i4l.xml
Library file : /home/mj/rvx_tutorial_mj2/rvx_synthesizer_obfuscated/interface/ml
si.xml
```

> gedit rvx\_each.mh  
아래 그림처럼 수정 → FPGA 종류에 맞게 수정하면  
그에 맞는 합성이 진행됨  
> make syn



# 새로운 플랫폼 만들기 3

```
mj@mj-940XGK: ~/rvx_tutorial_mj2/platform/test_prj_mj2/imp_genesys2_...
Generating RTL is complete

mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ make fpga
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ ls
app  imp_genesys2_2025-08-08  rvx_each.mh  test_prj_mj2.xml
arch Makefile                rvx_engine.log
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ cd imp_genesys2_2025-08-08/
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2/imp_genesys2_2025-08-08$ ls
create_generated_clock.tcl  set_false_path.tcl      set_tool_option.tcl
genesys2.cfg                set_fpga_imp_env.tcl    src
gen_mcs.tcl                 set_fpga_syn_env.tcl    test_prj_mj2.xml
Makefile                    set_fpga.tcl            xci
set_config_memory.tcl       set_ocd_env.tcl
set_design.tcl              set_path.tcl
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2/imp_genesys2_2025-08-08$ make imp

***** Vivado v2022.2 (64-bit)
**** SW Build 3671981 on Fri Oct 14 04:59:54 MDT 2022
**** IP Build 3669848 on Fri Oct 14 08:30:02 MDT 2022
** Copyright 1986-2022 Xilinx, Inc. All Rights Reserved.
```

- > make fpga → imp\_genesys2~~ 폴더 생성
- > cd imp\_genesys2\_2025-08-08/
- > make imp

# 새로운 플랫폼 만들기 4

```
mj@mj-940XGK: ~/rvx_tutorial_mj2/platform/test_prj_mj2/imp_genesys2_...
INFO: [Vivado 12-1842] Bitgen Completed Successfully.
INFO: [Common 17-83] Releasing license: Implementation
8 Infos, 28 Warnings, 0 Critical Warnings and 0 Errors encountered.
write_bitstream completed successfully
write_bitstream: Time (s): cpu = 00:00:21 ; elapsed = 00:00:21 . Memory (MB): peak = 4406.316 ; gain = 158.734 ; free physical = 9667 ; free virtual = 28576
## if [string equal $IMP_MODE "debug"] {
##     write_debug_probes -force ${IMP_RESULT_DIR}/${BIT_FILE_NAME}.ltx
## }
## touch ${IMP_RESULT_DIR}/gen_bit
# close_project
INFO: [Common 17-206] Exiting Vivado at Fri Aug  8 13:14:48 2025...
Bit: Generated
Timing: Success
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2/imp_genesys2_2025-08-08$ ls
create_generated_clock.tcl  set_config_memory.tcl  set_path.tcl
genesys2.cfg                set_design.tcl          set_tool_option.tcl
gen_mcs.tcl                 set_false_path.tcl      src
imp_result                  set_fpga_imp_env.tcl    test_prj_mj2.xml
include                     set_fpga_syn_env.tcl    vivado.jou
Makefile                    set_fpga.tcl            vivado.log
rvx_engine.log              set_ocd_env.tcl         xci
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2/imp_genesys2_2025-08-08$
```

> ls ← make imp 결과물(imp\_result) 생성됨

# 새로운 플랫폼 만들기 5

새로 만든 플랫폼/app 폴더에 예제가 없으므로 이전  
꺼 복사진행

> cp -r ../../test\_prj\_mj/app/hello/ ./

> cd hello

> make clean (다른 프로젝트에서 진행된 결과를 가  
지고 있으므로 지움)

> cd ../../

> cd imp\_genesys2\_2025-08-08

> make hello → 테스트 진행 확인

```
mj@mj-940XGK: ~/rvx_tutorial_mj2/platform/test_prj_mj2/imp_genesys2_...
mj@mj-940XGK:~/rvx_tutorial_mj2$ source rvx_setup.sh
mj@mj-940XGK:~/rvx_tutorial_mj2$ ls
imp_class_info  rvx_binary      rvx_init.mh      rvx_util
local_setup     rvx_config.mh   rvx_install      sync
Makefile        rvx_devkit      rvx_python_config.mh  this_repo_is_frozen
manual          rvx_engine.log  rvx_setup.sh     update.sh
platform        rvx_hwlib       rvx_ssw
README.md       rvx_init        rvx_synthesizer_obfuscated
mj@mj-940XGK:~/rvx_tutorial_mj2$ cd platform/
mj@mj-940XGK:~/rvx_tutorial_mj2/platform$ ls
Makefile rvx_engine.log test_prj_mj test_prj_mj2 tip_hello
mj@mj-940XGK:~/rvx_tutorial_mj2/platform$ cd test_prj_mj2
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ ls
app  fpga_component  Makefile  rvx_engine.log
arch imp_genesys2_2025-08-08 rvx_each.mh test_prj_mj2.xml
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ cd app/
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2/app$ ls
Makefile
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2/app$ cp -r ../../test_prj_mj2/app/hello/ ./
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2/app$ ls
hello  Makefile
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2/app$ cd hello/
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2/app/hello$ make clean
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2/app/hello$ cd ../../
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ ls
app  fpga_component  Makefile  rvx_engine.log
arch imp_genesys2_2025-08-08 rvx_each.mh test_prj_mj2.xml
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2$ cd imp_genesys2_2025-08-08/
mj@mj-940XGK:~/rvx_tutorial_mj2/platform/test_prj_mj2/imp_genesys2_2025-08-08$ make hello
/home/mj/rvx_tutorial_mj2/rvx_binary/compiler_basic/bin/riscv64-unknown-elf-gcc
-g -O1 -march=rv32im -mabi=ilp32 -fno-delete-null-pointer-checks -MD -Wall -fno-builtin-printf
-fno-reorder-functions -fdata-sections -ffunction-sections -I/home/mj/rvx_tutorial_mj2/platform/test_prj_mj2/app/hello/genesys2.debug/include -I/home/mj/rvx_tutorial_mj2/rvx_ssw/memorymap -I/home/mj/rvx_tutorial_mj2/platform/test_prj_mj2/arch/ssw/src -I/home/mj/rvx_tutorial_mj2/rvx_ssw/core/orca -I/home/mj/rvx_tutorial_mj2/rvx_ssw/riscv -I/home/mj/rvx_tutorial_mj2/rvx_ssw/system_ut
```

