

Epic-NOS8/ NOS-17:

Link: <https://lcsnosim.atlassian.net/browse/NOS-17>

Software-only SIM card simulator

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Repo: <https://github.com/tomasz-lisowski/swsim>

The project links and depends on project SWICC.

Repo: <https://github.com/tomasz-lisowski/swicc>

1. Step1:

Make swsim using the commande make

```
Makefile:2: lib/make-pal/pal.mak: No such file or directory
make: *** No rule to make target 'lib/make-pal/pal.mak'. Stop.

haddadrafik258@haddadrafik258:~/Desktop/fortest/NOS:17/swsim$ cd lib/
haddadrafik258@haddadrafik258:~/Desktop/fortest/NOS:17/swsim/lib$ ls
make-pal  swicc
haddadrafik258@haddadrafik258:~/Desktop/fortest/NOS:17/swsim/lib$
```

Add in the lib folder the two libraries pal.mak and swicc.

<https://github.com/tomasz-lisowski/swicc>

<https://github.com/tomasz-lisowski/make-pal>

2. Step2:

Same for SWICC : We add cJSON, make-pal and tau.

<https://github.com/jasmcaus/tau>

<https://github.com/DaveGamble/cJSON>

```
haddadrafik258@haddadrafik258:~/Desktop/fortest/NOS:17/swsim/lib/swicc/lib$ ls
cjson  make-pal  tau
haddadrafik258@haddadrafik258:~/Desktop/fortest/NOS:17/swsim/lib/swicc/lib$
```

- i. Clone the project make-pal in the folder lib
- ii. Clone tau and make the project (dir/lib/swicc)

git clone <https://github.com/jasmcaus/tau> tau

- iii. Clone Cjson and make project (dir/lib/swicc)

cd dir/swsim/lib/swicc/lib

git clone <https://github.com/DaveGamble/cJSON> cJSON

cd cJSON && mkdir build && cd build

cmake ..

make

```

82% Building C object tests/CMakeFiles/cjson_add.dir/cjson_add.c.o
84% Linking C executable cjson_add
84% Built target cjson_add
86% Building C object Tests/CMakeFiles/readme_examples.dir/readme_examples.c.o
88% Linking C executable readme_examples
88% Built target readme_examples
91% Building C object tests/CMakeFiles/minify_tests.dir/minify_tests.c.o
93% Linking C executable minify_tests
93% Built target minify_tests
95% Building C object fuzzing/CMakeFiles/fuzz_main.dir/fuzz_main.c.o
97% Building C object fuzzing/CMakeFiles/fuzz_main.dir/cjson_read_fuzzer.c.o
100% Linking C executable fuzz_main
100% Built target fuzz_main
haddadrafik258@haddadrafik258:~/Desktop/fortest/NOS:17/swsim/lib/swicc/lib/cjson/build$

```

3. Step3

Make the project SWICC and test the build.

```

haddadrafik258@haddadrafik258:~/Desktop/fortest/NOS:17/swsim/lib/swicc/build$ ./test.elf
[=====] Running 69 test suites.
[ RUN    ] apdu_rc.swicc apdu_rc_reset
[ OK     ] apdu_rc.swicc apdu_rc_reset (6.14us)
[ RUN    ] apdu_rc.swicc apdu_rc_enq_param_check
[ OK     ] apdu_rc.swicc apdu_rc_enq_param_check (0.26us)
[ RUN    ] apdu_rc.swicc apdu_rc_enq_data
[ OK     ] apdu_rc.swicc apdu_rc_enq_data (1.28us)
[ RUN    ] apdu_rc.swicc apdu_rc_deq_param_check
[ OK     ] apdu_rc.swicc apdu_rc_deq_param_check (0.51us)
[ RUN    ] apdu_rc.swicc apdu_rc_deq_data
[ OK     ] apdu_rc.swicc apdu_rc_deq_data (4.35us)
[ RUN    ] apdu_rc.swicc apdu_rc_len_rem
[ OK     ] apdu_rc.swicc apdu_rc_len_rem (1.28us)
[ RUN    ] fs_disk.swicc disk_save_param_check
[ OK     ] fs_disk.swicc disk_save_param_check (4.35us)
[ RUN    ] fs_disk.swicc disk_save_disk
Segmentation fault (core dumped)
haddadrafik258@haddadrafik258:~/Desktop/fortest/NOS:17/swsim/lib/swicc/build$

```

4. Step4

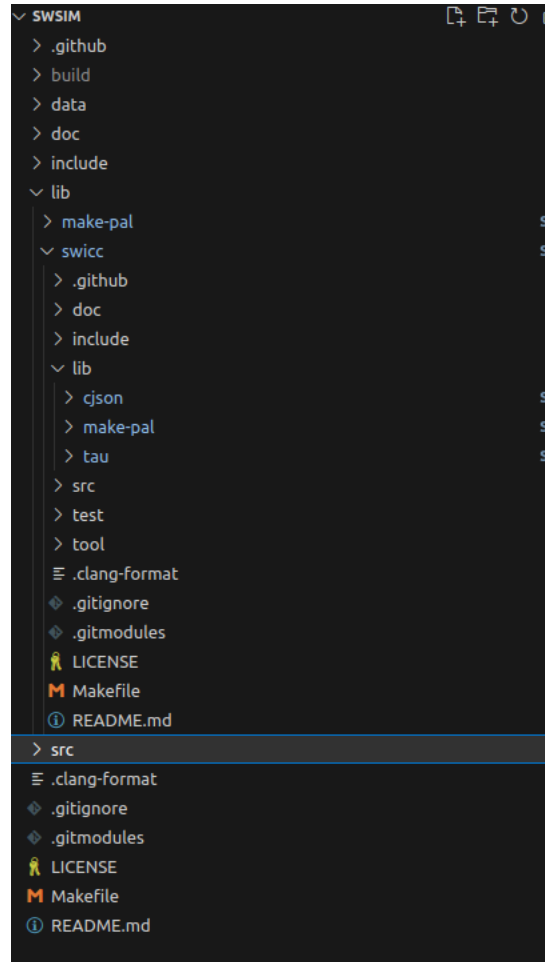
Make all the project and get the build folder.

```

haddadrafik258@haddadrafik258:~/Desktop/fortest/NOS:17/swsim$ make
gcc src/3gpp.c -o build/swsim/3gpp.o -W -Wall -Wextra -Werror -Wno-unused-parameter -Wconversion -Wshadow -O2 -Iinclude -Ilib/swicc/include -Llib/swicc/build -c -MMO
gcc src/apdu.c -o build/swsim/apdu.o -W -Wall -Wextra -Werror -Wno-unused-parameter -Wconversion -Wshadow -O2 -Iinclude -Ilib/swicc/include -Llib/swicc/build -c -MMO
gcc src/apduh.c -o build/swsim/apduh.o -W -Wall -Wextra -Werror -Wno-unused-parameter -Wconversion -Wshadow -O2 -Iinclude -Ilib/swicc/include -Llib/swicc/build -c -MMO
gcc src/fs.c -o build/swsim/fs.o -W -Wall -Wextra -Werror -Wno-unused-parameter -Wconversion -Wshadow -O2 -Iinclude -Ilib/swicc/include -Llib/swicc/build -lsimd -c -MMO
gcc src/gsm.c -o build/swsim/gsm.o -W -Wall -Wextra -Werror -Wno-unused-parameter -Wconversion -Wshadow -O2 -Iinclude -Ilib/swicc/include -Llib/swicc/build -lsimd -c -MMO
gcc src/main.c -o build/swsim/main.o -W -Wall -Wextra -Werror -Wno-unused-parameter -Wconversion -Wshadow -O2 -Iinclude -Ilib/swicc/include -Llib/swicc/build -c -MMO
gcc src/swsim.c -o build/swsim/swsim.o -W -Wall -Wextra -Werror -Wno-unused-parameter -Wconversion -Wshadow -O2 -Iinclude -Ilib/swicc/include -Llib/swicc/build -c -MMO
gcc build/swsim/3gpp.o build/swsim/apdu.o build/swsim/apduh.o build/swsim/fs.o build/swsim/gsm.o build/swsim/main.o build/swsim/swsim.o -o build/swsim.elf -W -xtra -Werror -Wno-unused-parameter -Wconversion -Wshadow -O2 -Iinclude -Ilib/swicc/include -Llib/swicc/build -lswiccc
haddadrafik258@haddadrafik258:~/Desktop/fortest/NOS:17/swsim$ ls
build_data doc include lib LICENSE Makefile README.md src
haddadrafik258@haddadrafik258:~/Desktop/fortest/NOS:17/swsim$ cd build/
haddadrafik258@haddadrafik258:~/Desktop/fortest/NOS:17/swsim/build$ ls
swsim swsim.elf
haddadrafik258@haddadrafik258:~/Desktop/fortest/NOS:17/swsim/build$

```

5. **Folder Project structure** should be:



6. Test Build SWSIM

```
haddad@rafiik258@haddad@rafiik258: ~/Desktop/fortest/MOS:17/swsim/builds $ ./swsim.elf
Using default server IP: '127.0.0.1'.
Using default server port: '37324'.
File system path is mandatory.
Usage: ./swsim.elf
        [--help | -h]
        <--ip ip | -i ip>
        <--port port | -p port>
        <--fs path | -f path>
        <--fs-gen path | -g path>

- IP and port are the address and the port of the server that swSIM will connect to (by default 127.0.0.1:37324).
- FS path is a location for loading and saving the swICC FS file.
- FS gen path is the JSON FS definition location for generating a swICC FS file.
- Note that if the FS gen path is given, the swICC FS file at the given path will be overwritten with the generated one.
- The file extension for swICC FS files is '.swicfs'.
haddad@rafiik258@haddad@rafiik258: ~/Desktop/fortest/MOS:17/swsim/builds $
```