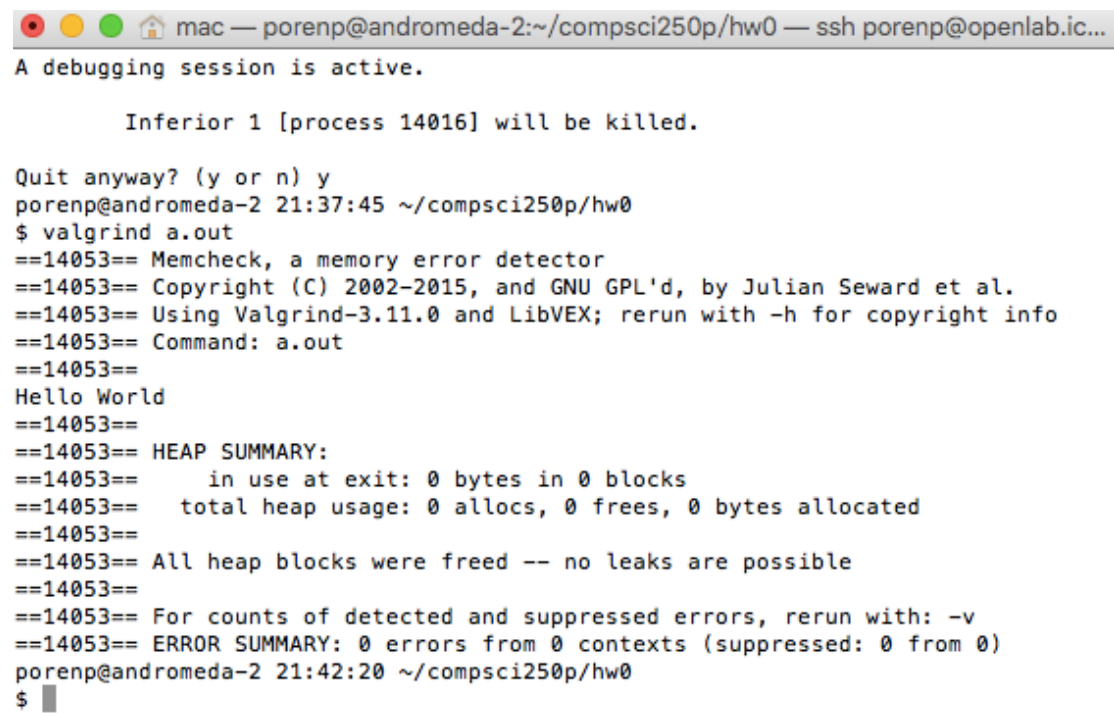# Compsci 250p HW 0

Folder description

- codebase: List all necessary files generating from the steps in HW0

    - Makefile: step 32

    - main: step 32

    - main.cpp: step 9

    - main.txt step 39-40

    - typescript: step 41

    - create_script: step 37

- images: List all screenshots from important steps, and the file name is the consequence of that step.

Some important screenshots

Step 30 : Run Valgrind


```
● ● ●   🏠 mac — porenp@andromeda-2:~/compsci250p/hw0 — ssh porenp@openlab.ic...
A debugging session is active.

        Inferior 1 [process 14016] will be killed.

Quit anyway? (y or n) y                                                        ]
porenp@andromeda-2 21:37:45 ~/compsci250p/hw0
$ valgrind a.out                                                               ]
==14053== Memcheck, a memory error detector
==14053== Copyright (C) 2002-2015, and GNU GPL'd, by Julian Seward et al.
==14053== Using Valgrind-3.11.0 and LibVEX; rerun with -h for copyright info
==14053== Command: a.out
==14053==
Hello World
==14053==
==14053== HEAP SUMMARY:
==14053==     in use at exit: 0 bytes in 0 blocks
==14053==   total heap usage: 0 allocs, 0 frees, 0 bytes allocated
==14053==
==14053== All heap blocks were freed -- no leaks are possible
==14053==
==14053== For counts of detected and suppressed errors, rerun with: -v
==14053== ERROR SUMMARY: 0 errors from 0 contexts (suppressed: 0 from 0)
porenp@andromeda-2 21:42:20 ~/compsci250p/hw0
$ ▮
```

30_1 execute: valgrind a.out

```
●  ●  ●      mac — porenp@andromeda-2:~/compsci250p/hw0 — ssh porenp@openlab.ic...
==14053== All heap blocks were freed -- no leaks are possible
==14053==
==14053== For counts of detected and suppressed errors, rerun with: -v
==14053== ERROR SUMMARY: 0 errors from 0 contexts (suppressed: 0 from 0)
porenp@andromeda-2 21:42:20 ~/compsci250p/hw0
[$ valgrind --tool=memcheck --leak-check=yes --show-reachable=yes --track-origins]
=yes a.out
==14059== Memcheck, a memory error detector
==14059== Copyright (C) 2002-2015, and GNU GPL'd, by Julian Seward et al.
==14059== Using Valgrind-3.11.0 and LibVEX; rerun with -h for copyright info
==14059== Command: a.out
==14059==
Hello World
==14059==
==14059== HEAP SUMMARY:
==14059==     in use at exit: 0 bytes in 0 blocks
==14059==   total heap usage: 0 allocs, 0 frees, 0 bytes allocated
==14059==
==14059== All heap blocks were freed -- no leaks are possible
==14059==
==14059== For counts of detected and suppressed errors, rerun with: -v
==14059== ERROR SUMMARY: 0 errors from 0 contexts (suppressed: 0 from 0)
porenp@andromeda-2 21:44:25 ~/compsci250p/hw0
$ ▮
```

30_2 execute: valgrind --tool=memcheck --leak-check=yes --show-reachable=yes --track-origins=yes a.out

Step 33: Run make

```
●  ●  ●      mac — porenp@andromeda-2:~/compsci250p/hw0 — ssh porenp@openlab.ic...
echo -----------compiling main.ccp to create executable program main------------
----
-----------compiling main.ccp to create executable program main----------------
g++ -ggdb -std=c++11 main.cpp -o main
porenp@andromeda-2 21:48:08 ~/compsci250p/hw0
$ vim Makefile                                                                   ]
porenp@andromeda-2 21:48:46 ~/compsci250p/hw0
$ make                                                                           ]
make: `main' is up to date.
porenp@andromeda-2 21:48:50 ~/compsci250p/hw0
$ ls                                                                             ]
main*   main.cpp   Makefile
porenp@andromeda-2 21:48:54 ~/compsci250p/hw0
$ rm main                                                                        ]
rm：是否移除普通檔案 'main'？ y                                                      ]
已移除 'main'
porenp@andromeda-2 21:48:58 ~/compsci250p/hw0
$ make                                                                           ]
echo -----------compiling main.ccp to create executable program main------------
----
-----------compiling main.ccp to create executable program main----------------
g++ -ggdb -std=c++11 main.cpp -o main
porenp@andromeda-2 21:49:01 ~/compsci250p/hw0
$ ▮
```

33: execute make

Step 34: Run file generate by Makefile

```
mac — porenp@andromeda-2:~/compsci250p/hw0 — ssh porenp@openlab.ic...

g++ -ggdb -std=c++11 main.cpp -o main
porenp@andromeda-2 21:48:08 ~/compsci250p/hw0
[$ vim Makefile
porenp@andromeda-2 21:48:46 ~/compsci250p/hw0
[$ make
make: `main' is up to date.
porenp@andromeda-2 21:48:50 ~/compsci250p/hw0
[$ ls
main*  main.cpp  Makefile
porenp@andromeda-2 21:48:54 ~/compsci250p/hw0
[$ rm main
[rm：是否移除普通檔案 'main'？ y
已移除 'main'
porenp@andromeda-2 21:48:58 ~/compsci250p/hw0
[$ make
echo ----------compiling main.ccp to create executable program main------------
----
----------compiling main.ccp to create executable program main----------------
g++ -ggdb -std=c++11 main.cpp -o main
porenp@andromeda-2 21:49:01 ~/compsci250p/hw0
[$ ./main
Hello World
porenp@andromeda-2 21:49:15 ~/compsci250p/hw0
$
```

34: execute main generated by Makefile