

```
stone@ubuntu: ~/System_Verilog_Udemy/4_IPC/11_Parameterized_Mailbox
1 class transaction;
2
3     bit [7:0] data;
4
5 endclass
6
7 class generator;
8     int data =12;
9
10    transaction t;
11
12    mailbox #(transaction) mbx; //mailbox가 어떤 데이터 타입을 처리할 수 있는지를 지정
13                                //즉 transaction 클래스안의 datatype 을 처리 할수 있음
14
15    bit [7:0] temp =3;
16
17    function new (mailbox #(transaction) mbx);
18        this.mbx = mbx;
19    endfunction
20
21    task run();
22
23        t = new(); //객체생성
24        t.data = 45;
25        mbx.put(t);
26        $display ("Data Send from gen : %0d",t.data);
27    endtask
28 endclass
29
30 class driver;
31     mailbox #(transaction) mbx;
32     transaction data;
33
34     function new (mailbox #(transaction) mbx);
35         this.mbx = mbx;
36     endfunction
37
38     task run();
39
40 "Parameterized_Mailbox.sv" 58L, 1022C written                                23,25-26    Top
```

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Parsing design file 'Parameterized_Mailbox.sv'

Top Level Modules:

tb

No TimeScale specified

Starting vcs inline pass...

2 modules and 0 UDP read.

recompiling module tb

However, due to incremental compilation, only 1 module needs to be compiled.

rm -f _csrc*.so pre_vcsobj_*.so share_vcsobj_*.so

ld -shared -Bsymbolic -o ../simv.daidir//_csrc0.so objs/amcQw.d.o

rm -f _csrc0.so

if [-x ../simv]; then chmod -x ../simv; fi

g++ -o ../simv -no-pie -Wl,--no-as-needed -Wl,-rpath-link=../ -Wl,-rpath='\$(ORIGIN)/simv.daidir' -Wl,-rpath=../simv.daidir -Wl,-rpath='\$(ORIGIN)/simv.daidir/scsim.db.dir' -L/usr/lib/x86_64-linux-gnu -L/lib/x86_64-linux-gnu -Wl,--no-as-needed -rdynamic -Wl,-rpath=/usr/stone/software/vcs2018/vcs/0-2018.09-SP2/linux64/lib -L/usr/stone/software/vcs2018/vcs/0-2018.09-SP2/linux64/lib -L/usr/stone/software/vcs2018/vcs/0-2018.09-SP2/linux64/lib -l3497_archive.1.so -lprev_archive.1.so -lcsrc0.so -lSIM_l.o -lcsrc0.so -lmapats_mop.o -lmapats.o -lrmr.o -lrmr_nd.o -lrmr_lvm_0_1.o -lrmr_llvm_0_0.o -lzerosoft_rt_stubs -lvirsim -lerrorinf -lsnpsmalloc -lvfs -lvcs -lwhole_archive -lvcsucli -Wl,-no-whole-archive -vcs_pli_stub.o /usr/stone/software/vcs2018/vcs/0-2018.09-SP2/linux64/lib/vcs_save_restore_new.o /usr/stone/software/verdi/verdi/Verdi_0-2018.09-SP2/share/PLI/VCS/LINUX64/pli.a -ldl -lc -lm -lpthread -ldl

../simv up to date

CPU time: .151 seconds to compile + .116 seconds to elab + .196 seconds to link

Verdi KDB elaboration done and the database successfully generated: 0 error(s), 0 warning(s)

stone@ubuntu:~/System_Verilog_Udemy/4_IPC/11_Parameterized_Mailbox\$./simv

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Compiler version 0-2018.09-SP2_Full64; Runtime version 0-2018.09-SP2_Full64; Sep 10 22:47 2023

Data Send from gen : 45

DATA Receive : 45

VCS Simulation Report

Time: 0

CPU time: 0.140 seconds; Data structure size: 0.0Mb

Sun Sep 10 22:47:10 2023

stone@ubuntu:~/System_Verilog_Udemy/4_IPC/11_Parameterized_Mailbox\$

```
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13                                //즉 transaction 클래스안의 datatype 을 처리 할수 있음
14
15    bit [7:0] temp =3;
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17    function new (mailbox #(transaction) mbx);
18        this.mbx = mbx;
19    endfunction
20
21    task run();
22
23        t = new(); //객체생성
24        t.data = 45;
25        mbx.put(temp); //transaction 클래스안 아닌 다른 datatype 을 mailbox 에 put시 컴파일에러
26        $display ("Data Send from gen : %0d",t.data);
27    endtask
28 endclass
29
30 class driver;
31     mailbox #(transaction) mbx;
32     transaction data;
33
34     function new (mailbox #(transaction) mbx);
35         this.mbx = mbx;
36     endfunction
37
38     task run();
39
40 "Parameterized_Mailbox.sv" 58L, 1115C written                                25,42-43    Top
```

Argument 'temp' to mailbox method 'put' does not match with the type 'transaction' of the mailbox 'this.mbx'. Please make sure that type of the argument is equivalent to type of mailbox. Please refer to SV LRM (IEEE Std 1800) for type equivalence rules.

1 error

CPU time: .201 seconds to compile

Verdi KDB elaboration done and the database successfully generated: 0 error(s), 0 warning(s)

stone@ubuntu:~/System_Verilog_Udemy/4_IPC/11_Parameterized_Mailbox\$ vcs -l vcs.log -sverilog -kdb -debug_access=all Parameterized_Mailbox.sv

Warning-[LINUX_KERNEL] Unsupported Linux kernel

Linux kernel '5.15.0-83-generic' is not supported.

Supported versions are 2.4* or 2.6*.

Chronologic VCS (TM)

Version 0-2018.09-SP2_Full64 -- Sun Sep 10 22:55:37 2023

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Parsing design file 'Parameterized_Mailbox.sv'

Top Level Modules:

tb

No TimeScale specified

Error-[SV-TMIM] Type mismatch in mailbox method

Parameterized_Mailbox.sv, 25

Argument 'temp' to mailbox method 'put' does not match with the type 'transaction' of the mailbox 'this.mbx'. Please make sure that type of the argument is equivalent to type of mailbox. Please refer to SV LRM (IEEE Std 1800) for type equivalence rules.

1 error

CPU time: .105 seconds to compile

Verdi KDB elaboration done and the database successfully generated: 0 error(s), 0 warning(s)

stone@ubuntu:~/System_Verilog_Udemy/4_IPC/11_Parameterized_Mailbox\$