

1.

a) Which objects in the diagram instantiate which?

random\_test -> env\_h

env\_h -> random\_tester\_h, uvm\_tlm\_fifo, driver\_h, coverage\_h, command\_monitor\_h, result\_monitor\_h, scoreboard\_h

scoreboard\_h -> uvm\_tlm\_analysis\_fifo

b) The following objects in the diagram are created by the new() function:

uvm\_tlm\_analysis\_fifo, uvm\_tlm\_fifo

c) The following objects in the diagram are created by reference to the UVM factory:

random\_test, env\_h, random\_tester\_h, driver\_h, coverage\_h, command\_monitor\_h, result\_monitor\_h, scoreboard\_h

d) Objects of the following classes retrieve BFM information from UVM by calling

uvm\_config\_db:

driver, command\_monitor, result\_monitor

e) Objects of the following classes instantiate uvm\_analysis\_port:

command\_monitor, result\_monitor

f) Objects of the following classes instantiate uvm\_get\_port:

driver

g) Objects of the following classes instantiate uvm\_put\_port:

base\_tester, random\_tester, add\_tester

h) The following uvm\_\*\_port classes are parametrized:

uvm\_analysis\_port, uvm\_get\_port, uvm\_put\_port

i) The following classes include the void write() method:

coverage, scoreboard

Name	Type	Size	Value
uvm_test_top	random_test	-	@1936
env_h	env	-	@2013
command_f	uvm_tlm_fifo #(T)	-	@2043
get_ap	uvm_analysis_port	-	@2247
get_peek_export	uvm_get_peek_imp	-	@2147
put_ap	uvm_analysis_port	-	@2197
put_export	uvm_put_imp	-	@2095
command_monitor_h	command_monitor	-	@2509
ap	uvm_analysis_port	-	@2599
coverage_h	coverage	-	@2342
analysis_imp	uvm_analysis_imp	-	@2392
drive_h	driver	-	@2311
command_port	uvm_get_port	-	@2655
random_tester_h	random_tester	-	@2280
command_port	uvm_put_port	-	@2707
result_monitor_h	result_monitor	-	@2540
ap	uvm_analysis_port	-	@2761
scoreboard_h	scoreboard	-	@2426
analysis_imp	uvm_analysis_imp	-	@2476
cmd_f	uvm_tlm_analysis_fifo #(T)	-	@2797
analysis_export	uvm_analysis_imp	-	@3043
get_ap	uvm_analysis_port	-	@2992
get_peek_export	uvm_get_peek_imp	-	@2894
put_ap	uvm_analysis_port	-	@2943
put_export	uvm_put_imp	-	@2845

Fig. 1. Printout of the UVM structure

2.

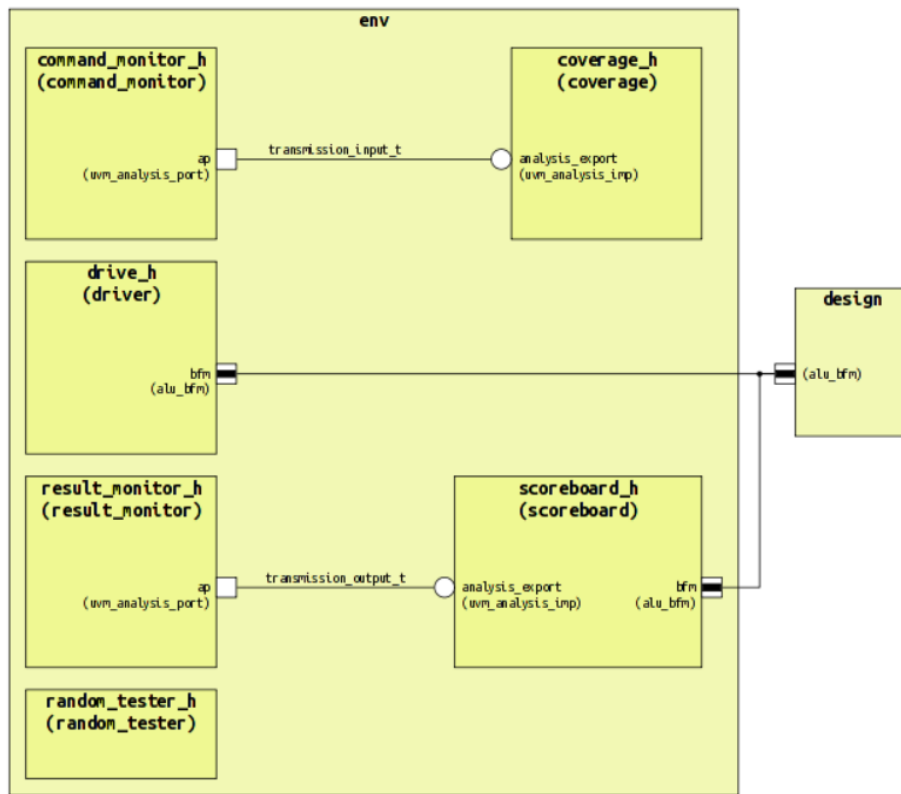


Fig. 2. UVM block diagram

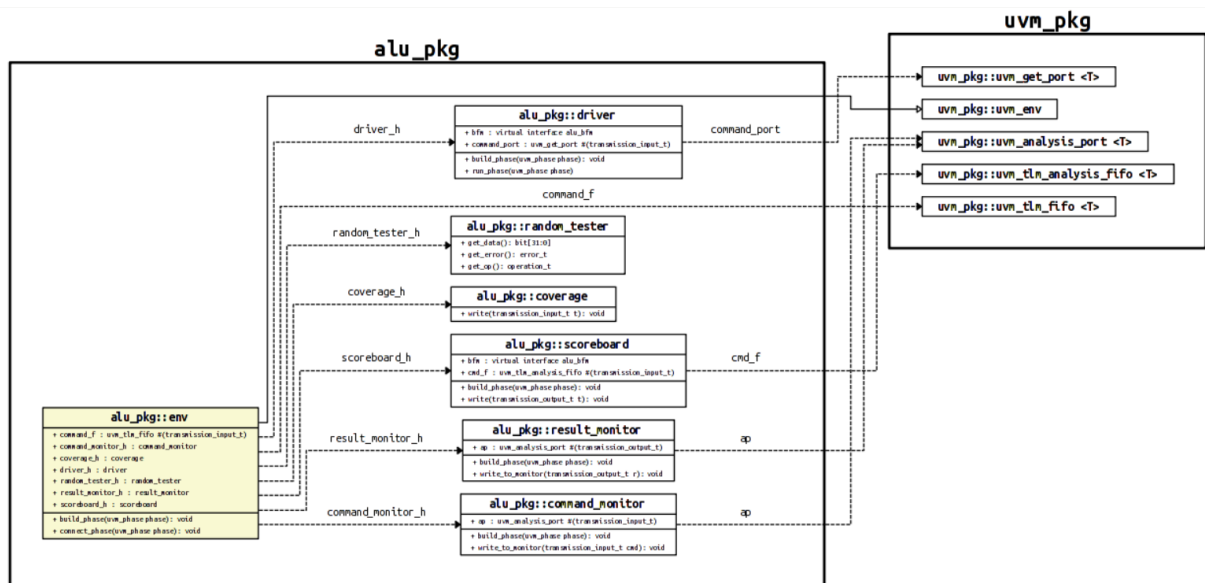


Fig. 3. UML diagram