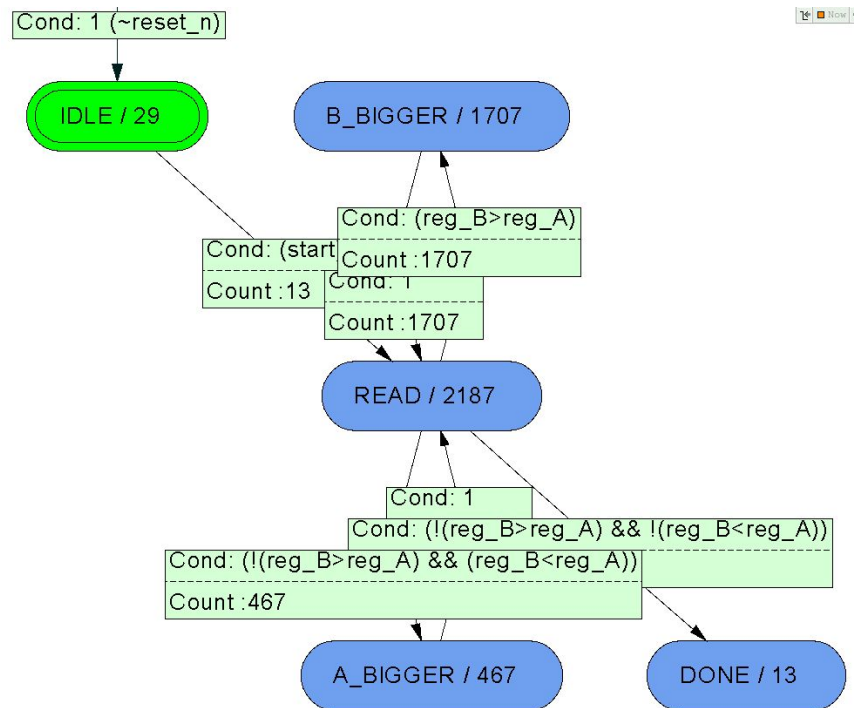


## Part 2 Explanation



ModelSim State-Machine Coverage Report

gdc\_ps 85.00%

States / Transitions	Hits	Status
State: IDLE	29	Covered
Trans: IDLE -> READ	13	Covered
State: READ	2187	Covered
Trans: READ -> DONE	13	Covered
Trans: READ -> A_BIGGER	467	Covered
Trans: READ -> B_BIGGER	1707	Covered
Trans: READ -> IDLE	0	ZERO
State: DONE	13	Covered
Trans: DONE -> IDLE	13	Covered
State: A_BIGGER	467	Covered
Trans: A_BIGGER -> READ	467	Covered
Trans: A_BIGGER -> IDLE	0	ZERO
State: B_BIGGER	1707	Covered
Trans: B_BIGGER -> READ	1707	Covered
Trans: B_BIGGER -> IDLE	0	ZERO

Figure 2: Transition Coverage

My design does NOT reach 100% coverage due to transitions not taking place. The common denominator of these two is that the destination is IDLE. One case we go to IDLE is when we have completed a computation at the state DONE. The other, and causing issue, is when the

system is reset. Whenever we reset, we have to go back to IDLE regardless of which state the system is in. The state DONE already has a path to IDLE that's executed every time; it can be seen in my code. So that's why A\_BIGGER, B\_BIGGER, and READ don't get transitioned to IDLE, because we don't reset when we're in these states.

NOTE: The difference between pre-coverage and post-coverage is that I changed my design to incorporate flip-flops and remove the latches I had.