✱ Delta Delay (Pg. 94)

* It is a very small delay
* Helps in ordering of events that occur at the same instant of time (simulation time).
* variable is assigned value immediately
* signal is assigned value after Δ delay.
* Ex:-

```
process (A,B,C,D)
variable temp1, temp2 ; bit ;
begin
    temp1 := A and B ;   Immediate assign
    temp2 := C and D ;   Immediate assign
    temp1 := temp1 or temp2 ; Immediate assign
    Z <= not temp1 ;  assign after Δ delay
end process
```

Seq. of exec
1 Immediate
2 Immediate
3 Immediate
4 Δ delay

Lecture - 5

✱ Wait Statement (Pg. 95)

* 3 types: wait on sensitivity list ;
  wait until boolean_expression
  wait for time_expression
* Can be combined like:
  wait on sensitivity-list until boolean expression for time_expression ;

* sensitivity list → execute the process once & wait at the end of process
  → In absence of sensi. list, the process never gets suspended & remains in an ∞ loop during the initialization phase

* A process can also be suspended using WAIT statements.

* process (sensti_list) == "wait on sensi_list" as last statement of that process.

* sensi_list & WAIT are not to be used together

* Eg: process
```
variable temp1, temp2 : bit;
begin
    temp1 := A and B;
    temp2 := C and D;
    temp1 := temp1 or temp2;
    Z <= not temp1;
    wait on A, B, C, D;
end process;
```

* Eg: process
```
begin
    wait on Data;
    sig_A <= data;
    sig_B <= sig_A;
end process;
```
Both assigned value at the same time (after Δ)

Δ delay, same
Δ delay

* Ex:- process
begin
wait on Data;
t+Δt sig_A <= Data; ← get value after Δt
t+Δt+Δt wait for 0 ns; ← suspend process for Δt
t+2Δt sig_B <= sig_A; ← this start at t+Δt & assigns at t+2Δt
end process

Q] What does the following "wait" statement imply? Where/when is it used?
wait for 0ns;
→ It means to wait for 1 delta cycle. It is used inside process so that the delta delayed signal assignments within a process can take place.

* WAIT until
* wait until CLOCK = '1';
* wait [until] [TRUE] —