### Chapter 04 - OpenROAD first run - TRAINING - Common

Course authors (Git file)



Start the first run



#### **EDA tools**

- One of the options of chapter 0 (preparations) is needed.
- Navigate to the /flow folder



## Enable the design in the Makefile

- Edit the Makefile:
  - Uncomment the line with your choosen DESIGN\_CONFIG from ihp-sg13g2. For example the gcd design:

```
DESIGN_CONFIG = . / designs/ihp - sg13g2/gcd/config .mk
```

 Re-comment the previous uncommented line with DESIGN\_CONFIG. For example the gcd on SKY130 design:

```
1 ESIGN_CONFIG = . / designs / asap7 / gcd / config . mk
```

 The line with the default design does not need to be commented. This only applies when no previous line with DESIGN\_CONFIG is set.

# Run the flowscript

• Run make from inside the /flow folder.



#### **Success**

• The choosen design should finish after a while and a lot of console output with a table (time/memory) like this:

1	Log	Elapsed seconds	Peak	Memory/MB	
2	1_1_yosys	0		24	
3	1_1_yosys_canonicalize	0		17	
4	1_1_yosys_hier_report	0		12	
5	2_1_floorplan	0		110	
6	2_2_floorplan_io	0		106	
7	2_3_floorplan_tdms	0		98	
8	2_4_floorplan_macro	0		106	
9	2_5_floorplan_tapcell	0		105	
10	2_6_floorplan_pdn	0		108	
11	3_1_place_gp_skip_io	0		108	
12	3_2_place_iop	0		107	
13	3_3_place_gp	0		320	
14	3_4_place_resized	0		289	
15	3_5_place_dp	0		112	
	4_1_cts	1		379	
17	5_1_grt	0		340	
18	5_2_route	93		899	<u> </u>
19	5_3_fillcell	0		111	
20	6_1_fill	0		113	
21	6_1_merge	1		368	
22	6 report	1		292	