**Report -> for Physical Training Labs**

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# Introduction to all component of Digital tool ASIC flow

## How to talk computer

Graphical user interface, diagram

Description automatically generated with medium confidence

## Open-source digital ASIC Flow

A picture containing diagram

Description automatically generated

## RTL to GDS Flow

Diagram

Description automatically generated

## Open Lane flow

Design Name: picorv32a:

/home/kunalg123/Desktop/work/tools/openlane\_working\_dir/pdks/sky130A/libs.ref/sky130\_fd\_sc\_hd

Directory presents inside this:

cdl doc gds lef lib mag maglef spice techlef Verilog

**Design Preparation:**

Example for config.tcl

Text

Description automatically generated

**Command to preparation data:**

./flow.tcl -interactive

prep -design picorv32a : merging the LEF

Text

Description automatically generated

## Synthesis

**Command used -> Run\_synthesis**

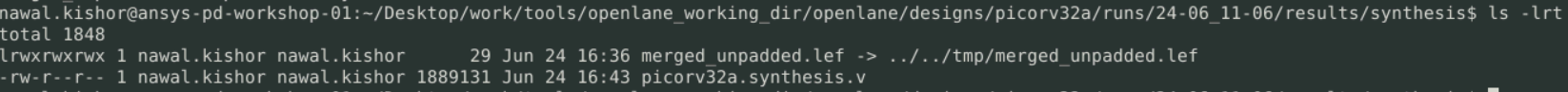
**Results:**

Summary of synthesis and Flop ratio =10%

Text

Description automatically generated

Files created after synthesis.



.v file and mapping has been done in synthesis stage:

Text

Description automatically generated

Report files:

nawal.kishor@ansys-pd-workshop-01:~/Desktop/work/tools/openlane\_working\_dir/openlane/designs/picorv32a/runs/24-06\_11-06/reports/synthesis$ ls

1-yosys\_4.chk.rpt 1-yosys\_dff.stat 2-opensta.min\_max.rpt 2-opensta.slew.rpt 2-opensta\_tns.rpt

1-yosys\_4.stat.rpt 1-yosys\_pre.stat 2-opensta.rpt 2-opensta.timing.rpt 2-opensta\_wns.rpt

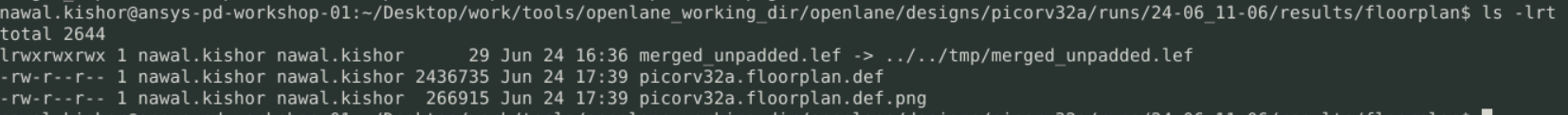
## Floor Planning

Inside README file there is all command are given for all stages and set parameters based on that.  
**Example:** Text

Description automatically generated

Priorities for the config files. Default config -> design config.tcl -> hdk .config.tcl

**Results file:**



Layout seen:

Open Layout in magic and query inside the GUI:

Graphical user interface, text, application

Description automatically generated

Standard cell placed at the lower side of the LEF.

Diagram

Description automatically generated with medium confidence