

# Chapter 01 - Server, Login, Shell - TRAINING - Bonus

Course authors (Git file)



- 1 Two ideas
- 2 Do the siliwiz lessons
- 3 Look for a tinytapeout design



# Two ideas

- For this Bonus training there are two ideas of what can be done.
- These tasks can be re-visited anytime during the course when there is free time. They might take longer than the course week itself.
- Taking these bonus ideas back to home as a starting point for your own EDA designs is intended.



## Do the siliwiz lessons

- Doing the siliwiz lessons helps a lot to learn more about semiconductors in general.
- In the course chapter about the open-source PDK the knowledge from Siliwiz will definatly be helpful for deeper understanding.
- If you want to go into analog circuit design, this might be a good start too.

Here you go (Link to lesson is upper left corner):

<https://app.siliwiz.com/>



# Look for a tinytapeout design

- In this course we have pre-configured and tested examples for the chip designs,
- But you could try an own designs. The course trainer might not be able to guide you fully. You're mostly on your own.



# What to expect

This idea is for:

- If you feel like you want to do an own design, but don't want to write a Verilog project from the start.
- Look into all the Tinytapeout shuttle runs. The designs are open-source.
- Open-source: You are allowed to review, modify, use the designs.
- SSo you can use them for creating your own exmaple for this course.



# Where and how to start

## Startpoint:

- Browse the designs from the shuttle runs.
- Find a design that looks fitting for you
- Only take designs with good documentation!!!
- Find the Github repository of the design.
- Review the documentation and the Verilog code.

<https://tinytapeout.com/runs/>



## Next steps (roughly)

After chapter 3 + 4 (Verilog and First run):

- Take a pre-configured example design (gcd) as template
- Copy the template as a new design (see ORFS tutorial)
- Add the Verilog from the TT design

After chapter 5 + 6 + 7 (PDK and OpenROAD GUI):

- Try to modify the rest of the new design:
  - config files
  - constraints
  - Makefile
- Give it a try: run the design

