Chapter 3 - Verilog - TRAINING - Advanced

Course authors (Git file)

LFSR - Linear Feedback Shift Register

This Training makes use of the Verilog code of the Linear Feedback Shift Register (LFSR) from the lecture slides.

LFSR as example

Task: Create directory and Verilog file

- Create a new directory for the LFSR example (in your Documents dir?)
- Create a new file lfsr .v inside that directory
- Copy the Verilog code from the lecture slides into the file lfsr .v

Analyse parts of the Verilog source

Task: Identify parts in the code

Find combinational and synchronous parts of the LFSR in
- the Verilog code
- the Schematic drawing (from the lecture slides)

Using yosys

Task: Learn to use yosys basics

Start using the tool yosys. You can get a basic help list with yosys --help. And for the commands it is

yosys --help <command>

- Learn how to synthesize a Verilog file to a JSOn netlist.
- Learn to save the JSON netlist to a file

Tip: Use ChatGPT or a search engine to get information about how to use yosys.

Task: Netlist

Generate
- JSON Netlist
from the LFSR Verilog code
- Open the JSON netlist. Can you read it?