General Troubleshooting Steps:

If structural module does not sim correctly, simulate all lower-level modules. If a lower-level module is not functioning properly, the top module will not work.

Check the elaborated design schematic to verify the structural module (the module that connects the lower-level modules together) is correct.

Use the technique explained in Dr. Benson’s troubleshooting video to trace the signal from input to the output to determine where the problem first appears. This technique helps isolate the problem.

Generally, if a design fails during synthesis or simulation, the problem is with either a design source or simulation file. If the design fails during implementation (including generating the bit stream), the problem is mostly constraints, but can be a code issue. If you get a warning “failed due to earlier errors” during implementation, usually there’s a warning (not an error) that occurred during either synthesis or simulation that should have been listed as an error.