



IEEE Solid State Circuits Society



BMSCE IEEE Solid State Circuits Society conducted “VeriVerse: Unraveling Verilog Mysteries” on 11th and 12th December 2023 from 2PM to 5PM at Seminar Hall in Department of Electronics Communication in BMS College of Engineering.

The workshop aimed to introduce **1st and 2nd year students to Digital Electronics and Verilog HDL** with hands on experience in HDL coding and give them a headstart in terms of the skills required to enter the semiconductor industry. The resource persons were Pradhyumna V Aacharya, Nikhil H Raju and Nihar Ajit, all Electronics and Communication Engineering students at BMS College of Engineering.

21 people had registered for the event, out of which 12 were IEEE members and 9 were non-IEEE members. On day 1, Pradhyumna introduced the participants to binary numbers and taught them conversion from binary to decimal and hexadecimal, basic boolean functions, basic gates and implementation of basic gates in Verilog HDL using Gate level Modelling. Nikhil discussed the structure of module, operators, data types, styles of description, and data flow modelling, all in the context of Verilog HDL. Nihar discussed various combinational circuits which formed the building blocks in digital design, such as half adder, half subtractor, full adder and full subtractor and implementation of these in gate level and dataflow modelling. On day 2, Nihar touched upon other combinational circuits such as Multiplexers, Demultiplexers, encoders and decoders. This was followed by Pradhyumna’s detailed explanation concepts of behavioural modelling which includes procedural assignments, timing control, conditional statements, multiway branching, loops and sequential blocks. He also discussed implementation of some combinational circuits using behavioural modelling including implementing 8X1 MUX from 2X1 MUX.

Oracle VM Virtualbox was setup in the laptops of the participants in order to type and execute the codes in Verilog HDL using Icarus Verilog and GTKWave. This way, the participants also learnt various basic commands in Ubuntu through hands-on experience. Slack was used to resolve doubts.

The workshop was a success, thanks to the enthusiasm of the participants and the adept teaching of the resource persons. Within a concise 6-hour duration, workshop participants acquired extensive knowledge in digital electronics and Verilog HDL.


