**Title:**

Design and implementation of a 4-stage Elevator Controller using Verilog.

**Abstract:**

Design and implementation of an elevator controller using Verilog hardware descriptive language (HDL). The elevator controller is based on finite state machine (FSM) technology, which defines the elevator process with different states and transitions. The controller accepts the floor level as input and generates control signals as output to control the lift motion and display the direction of motion and the present floor level. The design is simulated and verified using Xilinx software. The results show that the elevator controller can operate smoothly and efficiently with a simple and modular design.

**Outcomes:**

* A cost-efficient and flexible design that uses finite-state machine technology to define the elevator process with different states and transitions.
* A simulation and verification of the design using Xilinx software.
* A graphical representation of the floor plan, the output waveform, and the RTL schematic of the design.
* A comparison and analysis of the performance and resource utilization of the design with other existing technologies.