DIGITAL SYSTEM DESIGN

1. Understand the basics of digital systems and computers.
2. Apply knowledge of binary number systems and signed number representation to solve problems.
3. Analyze and design logic circuits using basic gates and Boolean algebra.
4. Construct and analyze combinational circuits such as adders, subtractors, and comparators.
5. Evaluate and implement multiplexers, decoders, encoders, and demultiplexers in circuit design.
6. Describe the operation of sequential circuits and different types of flip-flops.
7. Design and analyze registers, counters, and generalized sequential circuits for specific applications.