

Assignment No. 1

Computer Organisation - CS220

1. Design a Full Adder architecture using AND, OR, and XOR gates. You must follow structural style coding for your design.
2. Design a Full Subtractor architecture using AND, OR, XOR, and NOT gates. You must follow structural style coding for your design.
3. Design a 32-bit Adder using Full Adder that you have designed previously.
4. Design a 32-bit Subtractor using Full Subtractor that you have designed previously.
5. Design a 3 to 8 Opcode decoder.
6. Design a 4-input (4:1) multiplexer. Each of these inputs will be of dimension 32-bits.