King Saud University
College of Computer and Information Sciences
Department of Computer Science

CSC 220: Computer Organization

Labwork - 7

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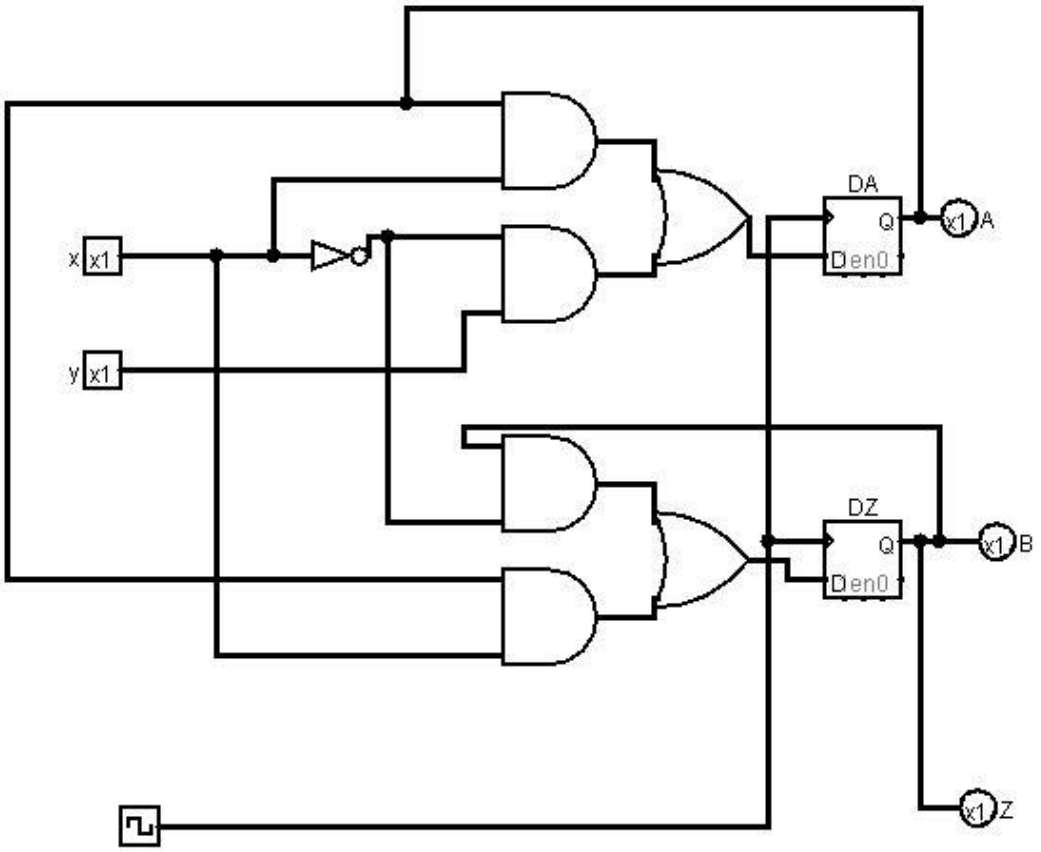
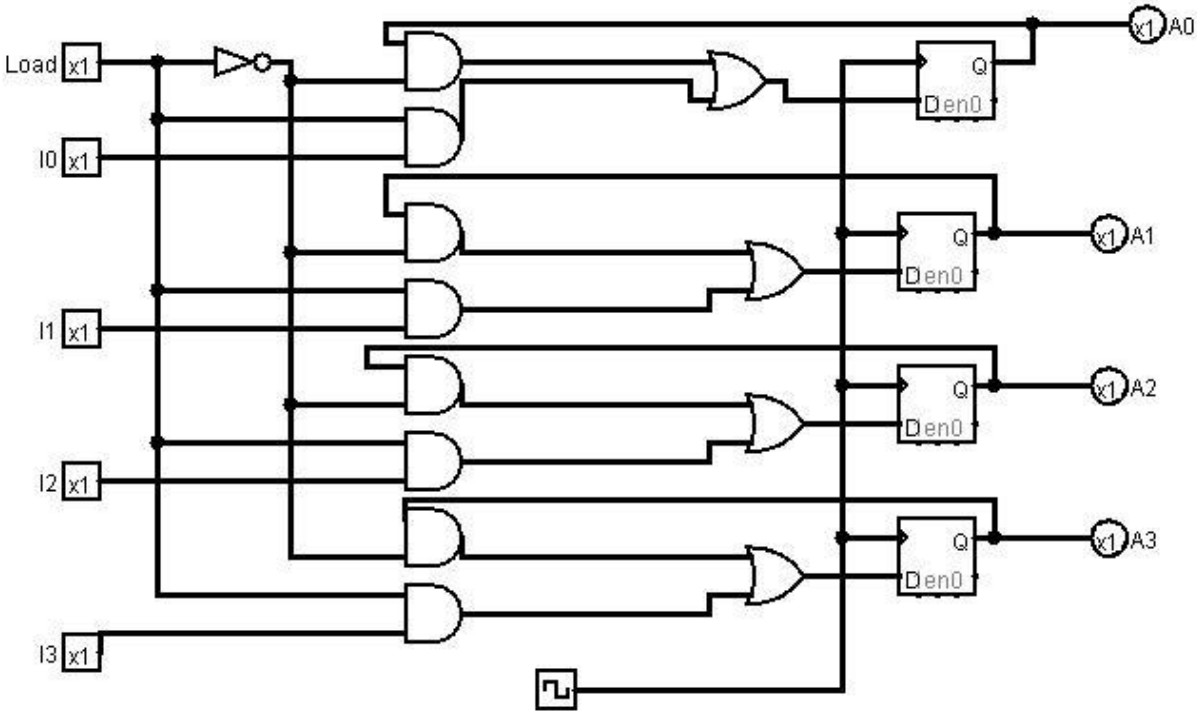
1. Introduction:

In this lab, we will learn about a sequential circuit that has two D flip-flops, A and B, two inputs, X and Y, and one output, Z. The flip-flop input equations and the circuit output are analyzed to understand how the state of the flip-flops changes over time. This lab will help understand the behavior of sequential logic and how previous states affect the current output.

2. Experiment:





3. Results:

Da = x'y + xA

Db = x'B + xA

4. Discussion

In this section you should discuss what you have learnt in this lab and write your conclusions. Through this lab, I learned how sequential circuits, which use D flip-flops, differ from combinational circuits in their ability to store and maintain state over time. By observing the inputs X and Y, I was able to see how they impacted the states of the D flip-flops A and B, as well as the final output Z.