CSE260 Lab Report

Experiment: Familiarization of Fundamental Logic

Submitted by

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01 November 2010

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Experiment Name: Familiarization of Fundamental Logic Gates

Objective:

- To get familiarized with fundamental logic gates and demonstrate the input output relationship of 2-input AND (IC-7432) and NOT (IC-7404) gates by constructing their truth tables

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Experimental Series

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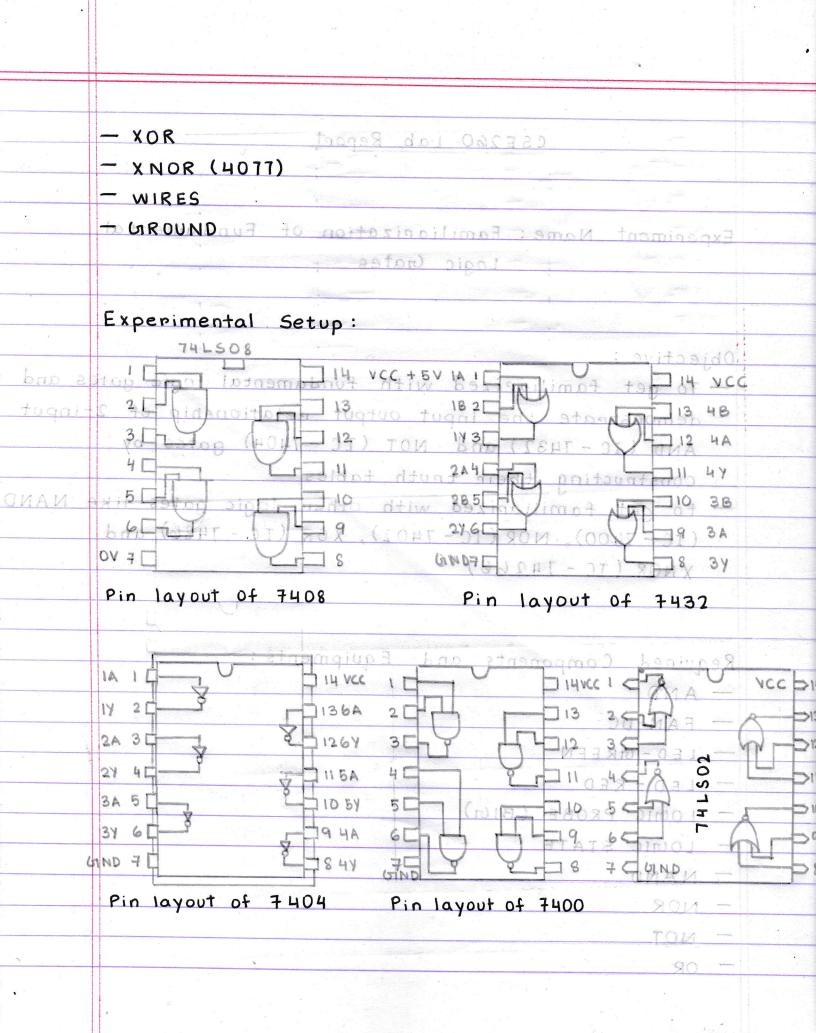
- to get familiarized with other logic gates like NAND (IC-7400), NOR (IC-7402), XOR (IC-7486) and XNOR (IC-14266)

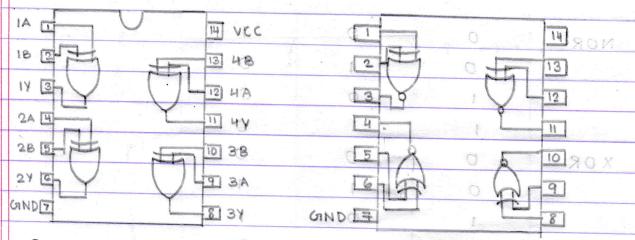
Required Components and Equipments:

- AND
- FAN-DC
- LED- GREEN
- LED-RED
- LOUIC PROBE (BIG)

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- LOUIC STATE
- NAND
- NOR OUF to tuoyof nig POP to tuoyof nig
- NOT
- or





Pin layout of 7486

Pin layout of 74266

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Results (Truth Table)

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	0	1	0	
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XNOR		0 1 0	1 0 A P II A	+0 tue

Discussion

This lab experiment has helped me to get familiarised with the Proteus software as it is one such software which I did not use before. I tried to navigate throughout the entire software by taking one step at a time, as shown in the methods during the online lab class. At first, I attained all the necessary component required for the experiment and began to place them accordingly. Initially, I faced some difficulties to drag the components into the designing area, but soon, I realised that we only had to select a particular component and double-click on the designing area to place the component. Then, I

inserted all the necessary components for each logic gate and joined all the loose ends with wires. I used different components for providing outputs such as a fan, red and green LED lights, in order to explore the software a little more. Once all the seperators apparatus was set up, I sho pushed the play button and changed the inputs to get different outputs. Then, I computed the inputs and outputs into the truth tables using the outputs from the software and prior knowledge. At the beginning, it was a lith little difficult to move about the screen, beco but now it is becoming more convenient. As we are unable to attend live classes in the university, I felt that Proteus is quite a good alternative. I think that even without the practical experiments, I could still understand most of how the experiment would be in reality.