

**HACETTEPE UNIVERSITY**  
**DEPARTMENT OF COMPUTER ENGINEERING**  
**BBM436 MICROPROCESSORS LAB.**

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**ASSIGNMENT 5**

**Topic**

I/O Map description

I/O mapping A technique used primarily in microprocessing, where the architecture of peripheral devices interfaces to a processor that supports input and output instructions.

An I/O mapped device is assigned one or more of the processor's I/O port addresses, and data and status information is transferred between the processor and peripheral device using the input and output instructions of the processor.

*Submit your work file by attaching it to your report.*

**Phase 1**

Create one byte input and one byte output unit on proteus in the system where you specify the I/O map. Loop the value you read from the input with the code you will print on the output.

**Phase 2**

Set up your output unit with two 7 segment elements. Implement the system hardware and software that enables the byte input to be showed on this screen as hexadecimal.

**Phase 3**

Redesign the 7 segment display to show 10 digits numbers. Make suggestions on what possible solutions in this situation could be.