İ.T.Ü 13.03.2014
Computer Engineering Department

COMPUTER ARCHITECTURE 2nd ASSISGNMENT

Due Date: 19.03.2014**, Wednesday,** 17.00.

Design the MC68000-based system that is described below.

Using RAM (Read/write memory) modules with the size of 4K*8, create the following memory spaces in the map of the MC68000.

- Start address: $A00000, size: 8K*8. Can be accessed both by user and supervisor. Access type: asynchronous with handshaking. **Only for instructions**. Access time: 40 ns
- Start address: $A00000, size: 8K*8. Can be accessed both by user and supervisor. Access type: asynchronous with handshaking. **Only for data**. Access time: 30 ns
- Start address: $B00000, size: 8K*8. Can be accessed **only by supervisor**. Access type: synchronous with strobe. For data and program. If the user attempts to access the memory space, the CPU will be warned.
- What is the access time of the slowest memory that can be used in the address space starting at $B00000.
- Solve the problem that can emergence in the communications with 2-way handshaking.
- Please **draw the circuit neatly**.

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- Plagiarized assignments will be given a negative.
- **Late submissions** are not accepted.

Submissions: Please submit your solution sheets to the Computer Architecture Course Assignment Box in the department secretary's office.