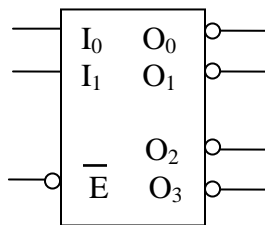


Nr	Name	Signature	Grade

A computer with a 16-bit addressbus and an 8-bit data bus has the following memory mapping:

- R/W memory starting from the address location \$0000 with a total capacity of 16K*8
- Read-only memory finishing at the address location \$5FFF with a total capacity of 8K*8

The size of the available R/W memory chips is 4K*8, and the size of the read-only memory chips is 8K*8. Please draw your design by using 2-to-4 decoder(as illustrated below), least number of OR gates and inverters. Show its connections with a microprocessor.



\overline{E}	I_1	I_0	O_0	O_1	O_2	O_3
1	X	X	1	1	1	1
0	0	0	0	1	1	1
0	0	1	1	0	1	1
0	1	0	1	1	0	1
0	1	1	1	1	1	0