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CSE 3666

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Extra Assignment: Mapped I/O

1. The bits that are ignored in this problem only effect the very right part of the hexadecimal address, 0. There are four possible combinations, since 2 bits are being ignored (2^2), for addresses that the device will respond to. They are as follows:

0xAE729B20
0xAE729B21
0xAE729B22
0xAE729B23

2. The bits that are ignored in this problem once again only effect the very right part of the hexadecimal address, 0. There will be 8 different possible combinations, since 3 bits are being ignored (2^3), for addresses that the device will respond to. They are as follows:

0xAE729B20
0xAE729B22
0xAE729B24
0xAE729B26
0xAE729B28
0xAE729B2A
0xAE729B2C
0xAE729B2E

3. The next bits that are being ignored effect the two right most parts of the hexadecimal address, 2 and 0. There will be a grand total of 128 possible combinations, since a total of 8 bits are being ignored (2^8), for addresses that the device will respond to. I listed the pattern that will occur up until the last one. Listing out all 128 possibilities would take a huge amount of time. The initial pattern sets the two rightmost parts of the address to 00. Now, the pattern is the rightmost part of the address 0 goes up by 1 each time, until it reaches F. Then, it goes back to 0 and the next left part of the address goes up by one. This process is repeated until both components are F:

0xAE729B00
0xAE729B01

0xAE729B02
0xAE729B03
0xAE729B04
0xAE729B05
0xAE729B06
0xAE729B07
0xAE729B08
0xAE729B09
0xAE729B10

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0xAE729BFD
0xAE729BFE
0xAE729BFF

4. The final problem the bits that are being ignored only effect the very left part of the hexadecimal address, A. There are four possible combinations, since 2 bits are being ignored (2^2), for addresses that the device will respond to. They are as follows:

0x2E729B20
0x6E729B20
0xAE729B20
0xEE729B20