# CPU Registers

1. If the register AH holds 0x093 and the register AL holds 0x1A3, what does the CPU register AX hold?
2. 0x1A3093
3. **0x0931A3**
4. 0x3A1390
5. 0x3903A1

Answer: B

# Conditional Jumps

1. When presented with the following assembly program, what will be the value of the EAX register after reaching the done label?

start:

mov $1, %eax

mov %eax, %edx

cmp %eax, %edx

je true

jmp done

true:

mov $2, %edx

mov %edx, %eax

done:

jmp done

1. 0x1
2. **0x2**
3. %edx

Answer: 0x2

1. When presented with the following data stack, what command is needed to return the value of 8?

|  |
| --- |
| 2 |
| 4 |
| 8 |
| 16 |
| Ret |
| %EBP |
| Int A |
| %ESP |

1. 4(%EBP)
2. 3(%EBP)
3. 2(%EBP)
4. 8(%EBP)
5. **12(%EBP)**
6. 16(%EBP)

Answer: 12(%EBP)

## Talking to Device

1. When a device needs to signal the CPU, it must raise a(n) \_\_\_\_
2. **Interrupt**
3. Alert
4. Flag
5. I/O

Answer: Interrupt

# Architecture

1. The CPU runs instructions through two steps:
2. Interrupt and Execute
3. Call and Return
4. Init and Ret
5. **Fetch and Execute**

**Answer**: Fetch and Execute