

Help

At 1:38, the title of the slide should read "STI" rather than "LDI."

INDIRECT ADDRESSING MODE

	2:41 / 2:41	1.0x			
--	-------------	------	--	--	--

Download transcript .txt

Show Discussion

New Post

1. CHECK YOUR UNDERSTANDING (1/1 point)

Which of the following statements incorrectly describes the LC-3 LDI instruction?

- ☐ It uses a PC-relative address.
- ☐ Both MDR and MAR are twice written.
- ☐ The memory is read twice.
- ☒ The register file is written twice. ✓

EXPLANATION

The first address is formed using PC-relative addressing mode.

MDR is first written by the address that is read from memory, and a second time when that address is used to read the memory data. MAR is first written with the address formed by the processing unit using PC-relative mode, and a second time from MDR when that address is used to retrieve the second address from memory.

The first read from memory is the address, and the second the data.

The register file is written only once with the data read from memory.

Final Check

Save



Hide Answer

You have used 1 of 2 submissions

Show Discussion

 New Post**2. CHECK YOUR UNDERSTANDING** (1 point possible)

What operation is performed by the LC-3 instruction 1110100000000000?

- ☐ The contents of the current instruction being processed are loaded into register 4.
- ☒ The contents of the next instruction to be processed are loaded into register 4. 
- ☐ The contents of the PC are loaded into register 4. 
- ☐ The PC is incremented and then loaded into register 4.

EXPLANATION

The opcode 1110 indicates that this is a LEA instruction, which does not read memory, but rather forms an address in the destination register. Since the offset is 0, the contents of the PC are loaded into register 4. (Since the PC was incremented during instruction fetch, the address will point to the instruction following the LEA instruction.)

Hide Answer

You have used 2 of 2 submissions

Show Discussion

 New Post



universities. Online courses from MITx, HarvardX, BerkeleyX, UTx and many other universities. Topics include biology, business, chemistry, computer science,

economics, finance, electronics, engineering, food and nutrition, history, humanities, law, literature, math, medicine, music, philosophy, physics, science, statistics and more. EdX is a non-profit online initiative created by founding partners Harvard and MIT.

Help

© 2015 edX Inc.

EdX, Open edX, and the edX and Open edX logos are registered trademarks or trademarks of edX Inc.

Terms of Service and Honor Code

Privacy Policy (Revised 10/22/2014)



About edX

About

News

Contact

FAQ

edX Blog

Donate to edX

Jobs at edX

<https://courses.edx.org/courses/CornellX/ENGRI1210x/1...>

Follow Us



Facebook



Twitter



LinkedIn



Google+



Tumblr



Meetup



Reddit



Youtube