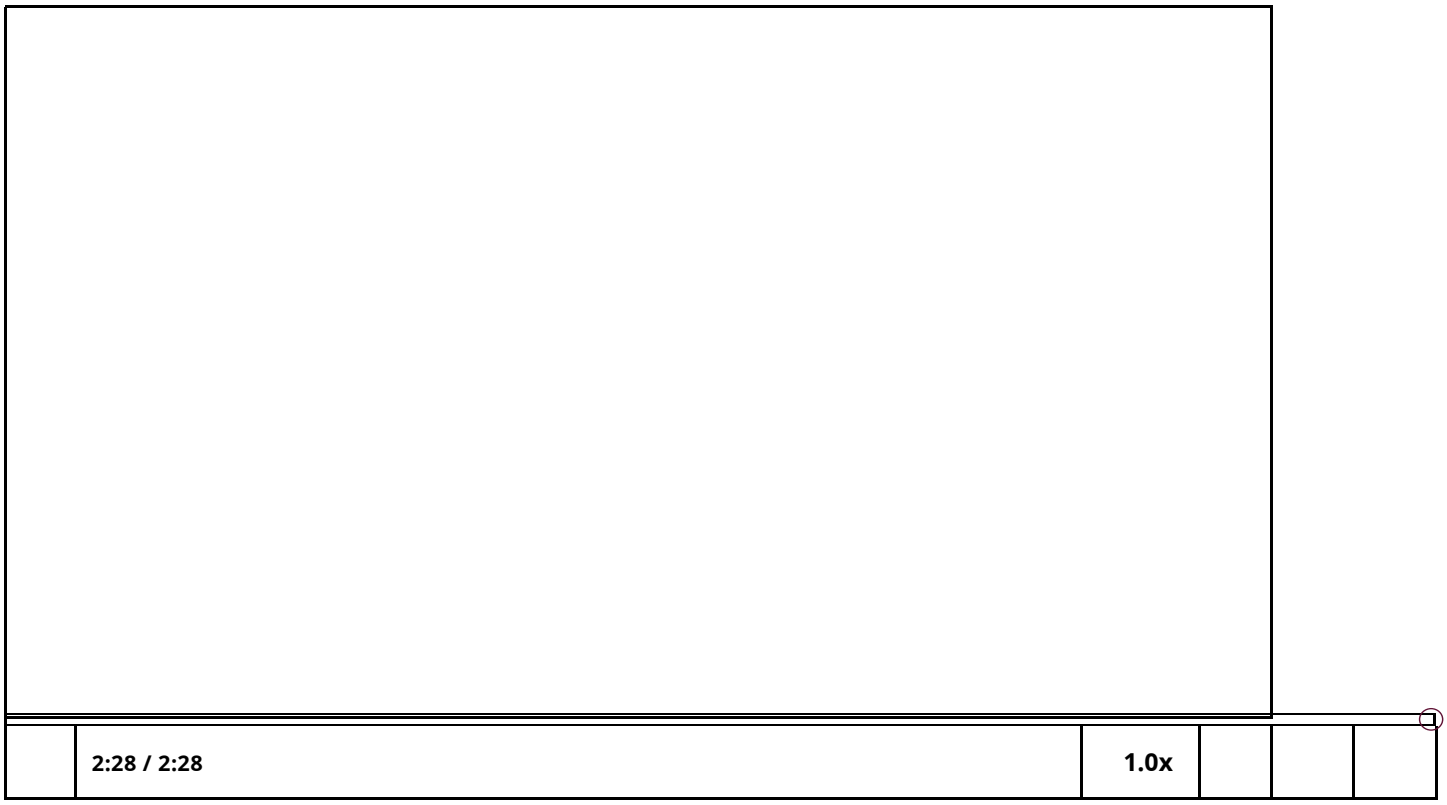
Help

LAST STEP: LC-3 CODE



2:28 / 2:28 1.0x

Download transcript .txt

Show Discussion New Post

1. CHECK YOUR UNDERSTANDING

Answer the following questions about the LC-3 code example.

1 A. CHECK YOUR UNDERSTANDING (1/1 point)

Why do we subtract 4 from R1?

- To convert R1 from ASCII to an integer.
- To check if R1 is equal to 4.
- (•) To check if the ASCII code in R1 matches the ASCII EOT character. ✔
- To check if the ASCII code in R1 matches the keyboard input.

Help

EXPLANATION

The ASCII EOT character is 4. By subtracting 4 from R1 and branching on the Z condition, we will exit the loop once we reach the end of the file.

Check | Hide Answer

Show Discussion | New Post

1 B.CHECK YOUR UNDERSTANDING (1/1 point)

How do we check for a match between the file character and the one from the keyboard and conditionally increment the count?

- (•) We subtract the ASCII values and then check the N and P bits. If either one of them is set, then we jump around the instruction that increments the count. ✔
- We subtract the ASCII values and then check the N and P bits. If either one of them is set, then we jump to the instruction that increments the count.
- We subtract the ASCII values and then check the Z bit. If it is set, then we jump around the instruction that increments the count.
- We subtract the ASCII values and then check the N, Z, and P bits. If any of them are set, then we jump around the instruction that increments the count.

EXPLANATION

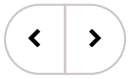
We first subtract the two values. If they don't match (the N or P bit is set), then we want to skip the increment of the count. Therefore, we follow the subtract instruction sequence with a branch instruction that checks the N and P bits and skips the next instruction (that increments the count) if either one is set.

Hide Answer *You have used 2 of 2 submissions*

Show Discussion

New Post

Help



EdX offers interactive online classes and MOOCs from the world's best 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.

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

Follow Us

 Facebook

 Twitter

 LinkedIn

 Google+

 Tumblr

 Meetup

 Reddit

 Youtube