```
Istindxoffrm.s
Mar 27, 23 22:55
                                                                        Page 1/2
* lstindxoffrm - Returns the last occurrence of character ch in the given Strin
g.
* This function searches for the last occurrence of the specified character ch
in the target
* string starting from the specified index "fromIndex" and working backwards. Th
e function
* returns the index of the last occurrence of the character ch in the target st
ring after
* the specified index "fromIndex". The search starts from the index x2 in the ta
rget string,
* where x2 is the specified index "fromIndex". The function returns -1 if the ch
aracter ch
* is not found in the target string.
* @param x0: Address of the target string to search.
* @param x1: Char to find in the target string
 * @param x2: Index to start the search at
 * @return x0: Index of the last occurrence of character ch in the target string
after the
               specified index "fromIndex". If the character is not found, return
s-1.
* Registers used: x0, x1, x2, w3
* Registers saved: none
.text
.global lstindxoffrm
   lstindxoffrm:
        // Change the last index to a pointer
        add x2, x2, x0
        sub x2, x2, #1
   loop:
        // Compare the current index with the starting index
        cmp x2, x0
        // If the current index is less than the starting index, then the charac
ter was not found
        b.lt error
        // Load the byte at the current index
        ldrb w3, [x2], #-1
        // Compare the byte with the search character
        cmp w3, w1
        // If the byte matches the search character, then the character was foun
d
        b.eq found
        // If the byte does not match the search character, then continue search
ing backwards
        b loop
   found:
        // Add 1 to the index of the found character to get the last occurrence
        add x2, x2, #1
        // Calculate the index of the last occurrence relative to the start of t
```

```
Mar 27, 23 22:55

he string
sub x0, x2, x0

// Subtract 1 to convert from 1-based indexing to 0-based indexing
sub x0, x0, #1

ret

error:
// Character not found, return -1
mov x0, #-1
ret
```