

| Mar 28, 23 21:00 | indxoffrm.s | Page 1/2 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|
| <pre> /** * indxoffrm - Returns the index of the first occurrence of character ch in the * given string * after the specified index "fromIndex". * * @param x0: Address of the target string to search. * @param x1: Character to find in the target string. * @param x2: Index to start the search in the target string. * * @return x0: Integer index of the first occurrence of character ch in the targ * et string * after the specified index "fromIndex". If the character is not fou * nd, * returns -1. * * This function searches for the first occurrence of the specified character ch * in the * target string starting from the specified index "fromIndex" onwards. The funct * ion returns * the index of the first occurrence of the character ch in the target string af * ter the * specified index "fromIndex". The search starts from the index x2+1 in the targ * et string, * where x2 is the specified index "fromIndex". The function returns -1 if the ch * aracter ch * is not found in the target string. * * Registers used: x0, x1, x2, w2 * Registers saved: none */ .text .global indxoffrm indxoffrm: // Save the target string pointer on the stack str x0, [sp, #-16]! // Calculate the starting index for the search add x0, x0, x2 add x0, x0, #1 loop: // Load a byte from the target string ldrb w2, [x0], #1 // Check if the byte is the terminating null byte cmp w2, #0 b.eq error // Check if the byte is the character to find cmp w2, w1 b.eq found // Jump back to the beginning of the loop b loop found: // Restore the target string pointer from the stack ldr x1, [sp], #16 // Calculate and return the index of the found character sub x0, x0, x1 </pre> | | |

| Mar 28, 23 21:00 | indxoffrm.s | Page 2/2 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|
| <pre> sub x0, x0, #1 ret error: // Remove the saved target string pointer from the stack add sp, sp, #16 // Return -1 to indicate that the character was not found mov x0, #-1 ret </pre> | | |