

CmpSci 201

Lab 3

For the following assignment, you will need to use the two new system calls:

- SWI #h00F00001 Gets the next character from standard input and puts it's ASCII value in R0
- SWI #h00F00002 Prints the character (i.e. lower 8 bits) value in R0 to Standard out

To input a value to standard in, simply type it into the lower text buffer labeled 'Standard Input' and hit return. This will set the character string in the standard input buffer to be what you typed followed by a terminating NULL character. Note that the carriage return will NOT be part of the string. So if you typed "foo" into standard input and then hit return, the standard input buffer would contain (in this order) 'f', 'o', 'o', NULL.

You may also find the following chart of the ASCII characters useful (the values are in Hex):

00 nul	01 soh	02 stx	03 etx	04 eot	05 enq	06 ack	07 bel
08 bs	09 ht	0a nl	0b vt	0c np	0d cr	0e so	0f si
10 dle	11 dc1	12 dc2	13 dc3	14 dc4	15 nak	16 syn	17 etb
18 can	19 em	1a sub	1b esc	1c fs	1d gs	1e rs	1f us
20 sp	21 !	22 "	23 #	24 \$	25 %	26 &	27 '
28 (29)	2a *	2b +	2c ,	2d -	2e .	2f /
30 0	31 1	32 2	33 3	34 4	35 5	36 6	37 7
38 8	39 9	3a :	3b ;	3c <	3d =	3e >	3f ?
40 @	41 A	42 B	43 C	44 D	45 E	46 F	47 G
48 H	49 I	4a J	4b K	4c L	4d M	4e N	4f O
50 P	51 Q	52 R	53 S	54 T	55 U	56 V	57 W
58 X	59 Y	5a Z	5b [5c \	5d]	5e ^	5f _
60 `	61 a	62 b	63 c	64 d	65 e	66 f	67 g
68 h	69 i	6a j	6b k	6c l	6d m	6e n	6f o
70 p	71 q	72 r	73 s	74 t	75 u	76 v	77 w
78 x	79 y	7a z	7b {	7c	7d }	7e ~	7f del

1. Write a program that outputs the string "Fish" to standard output.
2. Write a program that outputs the offset of the letter 'H' in an inputted string (of length less than 10). For instance, "abcHd" would output "3", and "abcd" would output "-1". For this, it may helpful to realize that, in ASCII, the encodings for numbers are in order and start at 0x30 (e.g. '0' is at 0x30, and '5' is at 0x35).