

OX **BARE**
CB **METAL**

**So far, we've lived
in a world without
much structure...**

What? And why?

Reconsider...

A previous program

1 901

2 705

3 640

4 801

5 551

6 902

7 000

40 350

41 551

42 150

43 351

44 598

45 199

46 347

51 000

98 600

ASCII (1977/1986)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0x	NUL	SOM	STX	ETX	EOT	ENQ	ACK	BEL	BS	HT	LF	VT	FF	CR	SO	SI
1x	DLE	DC1	DC2	DC3	DC4	NAK	SYN	ETB	CAN	EM	SUB	ESC	FS	GS	RS	US
2x	SP	!	"	#	\$	%	&	'	()	*	+	,	-	.	/
3x	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
4x	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5x	P	Q	R	S	T	U	V	W	X	Y	Z	[\]	^	_
6x	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
7x	p	q	r	s	t	u	v	w	x	y	z	{		}	~	DEL

Changed or added in 1963 version
 Changed in both 1963 version and 1965 draft

A = 10
 B = 11
 C = 12
 D = 13
 E = 14
 F = 15

**Write a
program to
translate the
following...**

This is your program's
input:

04×8

04×5

04×C

04×C

04×F

01×F

04×C

05×0

04×3

02×1

00×0

00×0

We have to make choices.

How do we represent...

?



04xC

What do we need?

Some subroutines...

- Decide how to decode input
- Decide how to translate the input to integer form
- Decide how to store and retrieve later numbers/letters.

**Now implement a
subroutine we'll call
toLower, and
lowercase the
message.**

Clock cycles

Complexity per
instruction in our LPC
ISA

1XX	3
2XX	3
3XX	1
4LR	1 PER SHIFT
5XX	2
6XX	2
7XX	2
8XX	2
901	1
902	2
000	0