

1 ASCII code for plain text

Shown below is a hex table for standard ASCII code

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

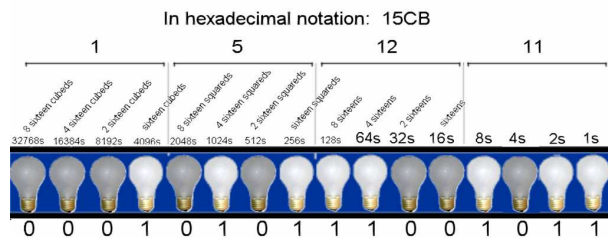
The row number is the sixteens digit and the column number the units digit.

- (a) Write your name in 8-bit ASCII code.
- (b) Decipher the ASCII code
010101110110000101101100011101000110010101110010
- (c) If you know someone else doing this course you might exchange codes with them and decipher messages you send to one another.

2 Binary and hexadecimal representation of numbers

Hexadecimal notation

Use 16_{10} as the base to shorten the length of the strings.
Then $10_{16} = 16_{10} = 10000_2$
Symbols used for 10, 11, 12, 13, 14, 15 are A, B, C, D, E, F.



- (a) Convert the binary numerals 11000101 and 10000101010 to hexadecimal numerals and hence to decimals.
- (b) Convert the binary numbers 10111.101 and 0.0010101 to decimals.
- (c) Convert the decimal numeral 2008 to a binary one and hence to a hexadecimal one.

Convert decimal 1943 to hexadecimal first and hence write down its binary representation.

- (d) Write the ASCII code for: 2008