

**NAME**

ascii - ASCII character set encoded in octal, decimal, and hexadecimal

**DESCRIPTION**

ASCII is the American Standard Code for Information Interchange. It is a 7-bit code. Many 8-bit codes (e.g., ISO 8859-1) contain ASCII as their lower half. The international counterpart of ASCII is known as ISO 646-IRV.

The following table contains the 128 ASCII characters.

C program '\X' escapes are noted.

Oct	Dec	Hex	Char	Oct	Dec	Hex	Char
000	0	00	NUL '\0' (null character)	100	64	40	@
001	1	01	SOH (start of heading)	101	65	41	A
002	2	02	STX (start of text)	102	66	42	B
003	3	03	ETX (end of text)	103	67	43	C
004	4	04	EOT (end of transmission)	104	68	44	D
005	5	05	ENQ (enquiry)	105	69	45	E
006	6	06	ACK (acknowledge)	106	70	46	F
007	7	07	BEL '\a' (bell)	107	71	47	G
010	8	08	BS '\b' (backspace)	110	72	48	H
011	9	09	HT '\t' (horizontal tab)	111	73	49	I
012	10	0A	LF '\n' (new line)	112	74	4A	J
013	11	0B	VT '\v' (vertical tab)	113	75	4B	K
014	12	0C	FF '\f' (form feed)	114	76	4C	L
015	13	0D	CR '\r' (carriage ret)	115	77	4D	M
016	14	0E	SO (shift out)	116	78	4E	N
017	15	0F	SI (shift in)	117	79	4F	O
020	16	10	DLE (data link escape)	120	80	50	P
021	17	11	DC1 (device control 1)	121	81	51	Q
022	18	12	DC2 (device control 2)	122	82	52	R
023	19	13	DC3 (device control 3)	123	83	53	S
024	20	14	DC4 (device control 4)	124	84	54	T
025	21	15	NAK (negative ack.)	125	85	55	U
026	22	16	SYN (synchronous idle)	126	86	56	V
027	23	17	ETB (end of trans. blk)	127	87	57	W
030	24	18	CAN (cancel)	130	88	58	X
031	25	19	EM (end of medium)	131	89	59	Y
032	26	1A	SUB (substitute)	132	90	5A	Z
033	27	1B	ESC (escape)	133	91	5B	[
034	28	1C	FS (file separator)	134	92	5C	\ '\\'
035	29	1D	GS (group separator)	135	93	5D	]
036	30	1E	RS (record separator)	136	94	5E	
037	31	1F	US (unit separator)	137	95	5F	_
040	32	20	SPACE	140	96	60	`
041	33	21	!	141	97	61	a
042	34	22	"	142	98	62	b
043	35	23	#	143	99	63	c
044	36	24	\$	144	100	64	d
045	37	25	%	145	101	65	e
046	38	26	&	146	102	66	f
047	39	27	'	147	103	67	g
050	40	28	(	150	104	68	h
051	41	29	)	151	105	69	i
052	42	2A	*	152	106	6A	j

053	43	2B	+	153	107	6B	k
054	44	2C	,	154	108	6C	l
055	45	2D	-	155	109	6D	m
056	46	2E	.	156	110	6E	n
057	47	2F	/	157	111	6F	o
060	48	30	0	160	112	70	p
061	49	31	1	161	113	71	q
062	50	32	2	162	114	72	r
063	51	33	3	163	115	73	s
064	52	34	4	164	116	74	t
065	53	35	5	165	117	75	u
066	54	36	6	166	118	76	v
067	55	37	7	167	119	77	w
070	56	38	8	170	120	78	x
071	57	39	9	171	121	79	y
072	58	3A	:	172	122	7A	z
073	59	3B	;	173	123	7B	{
074	60	3C	<	174	124	7C	
075	61	3D	=	175	125	7D	}
076	62	3E	>	176	126	7E	
077	63	3F	?	177	127	7F	DEL

## Tables

For convenience, below are more compact tables in hex and decimal.

2	3	4	5	6	7	30	40	50	60	70	80	90	100	110	120		
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0:	0	@	P	`	p	0:	(	2	<	F	P	Z	d	n	x		
1:	!	1	A	Q	a	q	1:	)	3	=	G	Q	[	e	o	y	
2:	"	2	B	R	b	r	2:	*	4	>	H	R	\	f	p	z	
3:	#	3	C	S	c	s	3:	!	+	5	?	I	S	]	g	q	{
4:	\$	4	D	T	d	t	4:	"	,	6	@	J	T	h	r		
5:	%	5	E	U	e	u	5:	#	-	7	A	K	U	_	i	s	}
6:	&	6	F	V	f	v	6:	\$	.	8	B	L	V	`	j	t	
7:	^	7	G	W	g	w	7:	%	/	9	C	M	W	a	k	u	DEL
8:	(	8	H	X	h	x	8:	&	0	:	D	N	X	b	l	v	
9:	)	9	I	Y	i	y	9:	^	1	;	E	O	Y	c	m	w	
A:	*	:	J	Z	j	z											
B:	+	;	K	[	k	{											
C:	,	<	L	\	l												
D:	-	=	M	]	m	}											
E:	.	>	N		n												
F:	/	?	0	_	o	DEL											

## NOTES

### History

An **ascii** manual page appeared in Version 7 of AT&T UNIX.

On older terminals, the underscore code is displayed as a left arrow, called backarrow, the caret is displayed as an up-arrow and the vertical bar has a hole in the middle.

Uppercase and lowercase characters differ by just one bit and the ASCII character 2 differs from the double quote by just one bit, too. That made it much easier to encode characters mechanically or with a non-microcontroller-based electronic keyboard and that pairing was found on old teletypes.

The ASCII standard was published by the United States of America Standards Institute (USASI)

in 1968.

**SEE ALSO**

[charsets\(7\)](#), [iso\\_8859-1\(7\)](#), [iso\\_8859-10\(7\)](#), [iso\\_8859-11\(7\)](#), [iso\\_8859-13\(7\)](#), [iso\\_8859-14\(7\)](#), [iso\\_8859-15\(7\)](#), [iso\\_8859-16\(7\)](#), [iso\\_8859-2\(7\)](#), [iso\\_8859-3\(7\)](#), [iso\\_8859-4\(7\)](#), [iso\\_8859-5\(7\)](#), [iso\\_8859-6\(7\)](#), [iso\\_8859-7\(7\)](#), [iso\\_8859-8\(7\)](#), [iso\\_8859-9\(7\)](#), [utf-8\(7\)](#)

**COLOPHON**

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