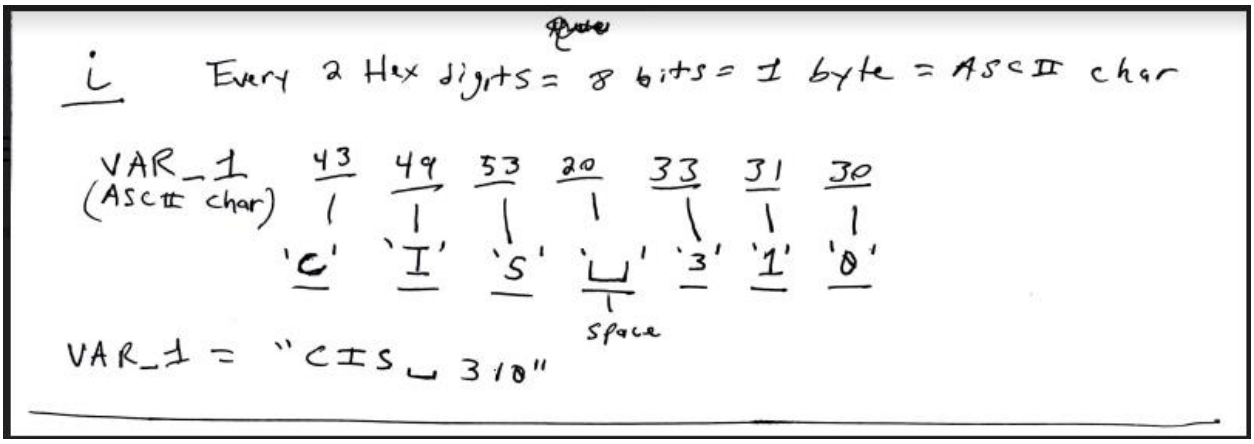
EXAM 1
CIS 310
summer, 2021
Your Name **___Demetrius Johnson_____**
notice: I answered the questions on paper, scanned them, and took screenshots of them and pasted them into this document; my printer is out of ink at the moment, so I figured out a way to do this and make it still neat and easy to grade. Thank you(:
Upload your answers on CANVAS by the midnight 6/6/21 (Sun). Write legibly.

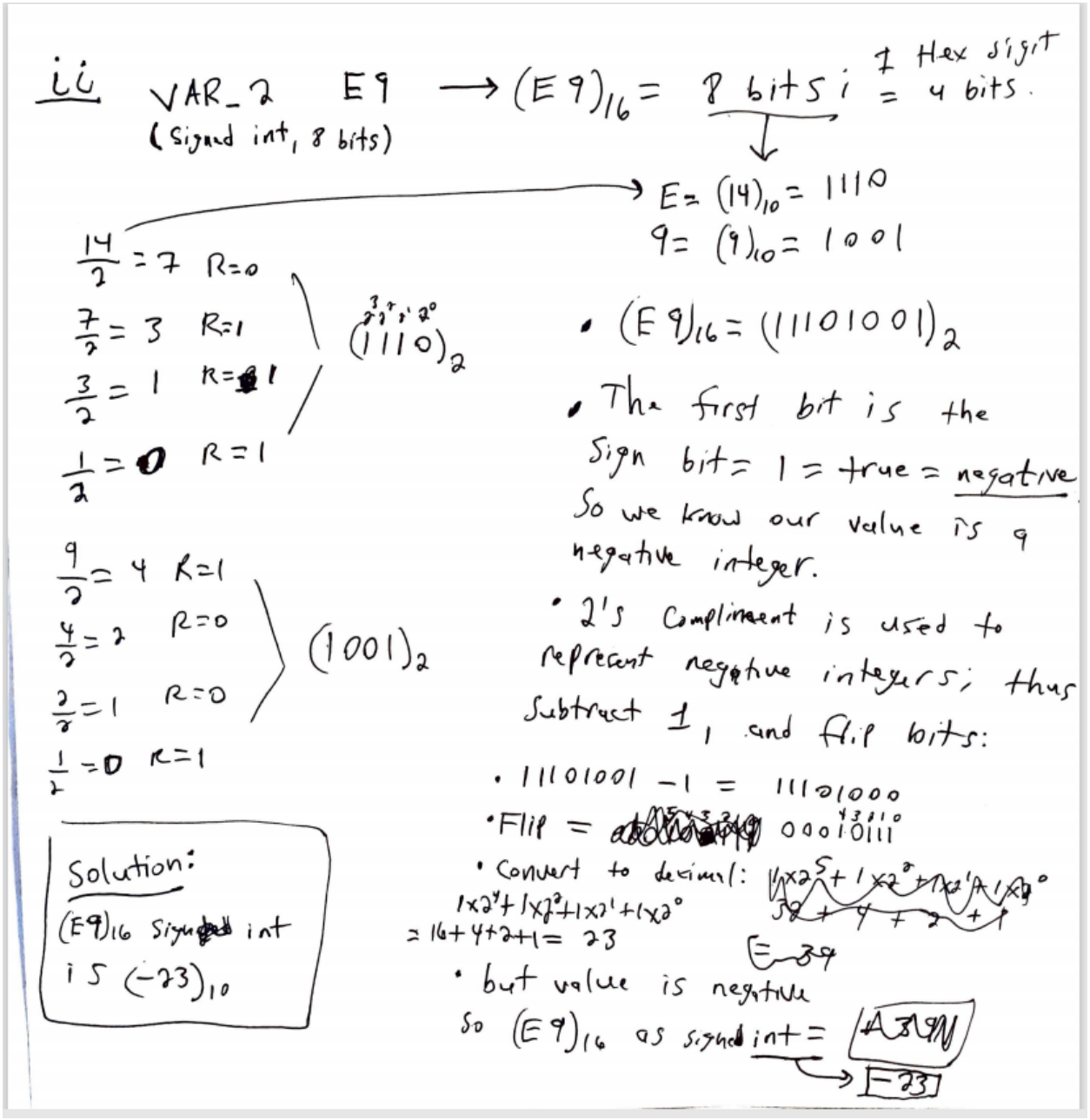
1. Decode (or interpret) the following as indicated. Use the ASC II table at the end of the exam if necessary.

VAR_1	43495320333130
VAR_2	E9
VAR_3	42F70000

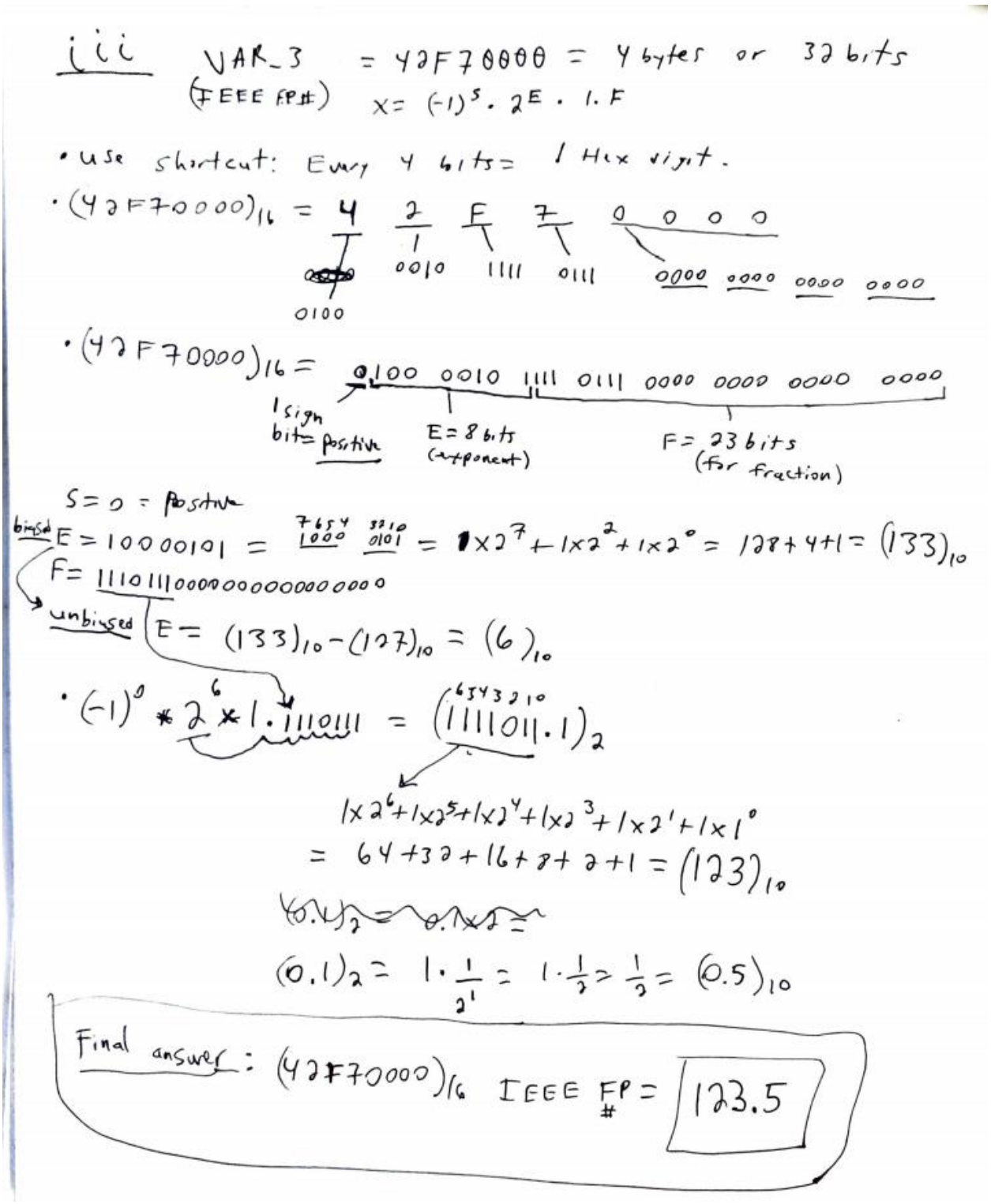
i.VAR_1 as ASCII characters (5 points)



ii.VAR_2 as a signed integer in one byte (show all work) (10 points)



iii.VAR_3 as An IEEE Floating point number in 4 bytes (show all work) (20 points).

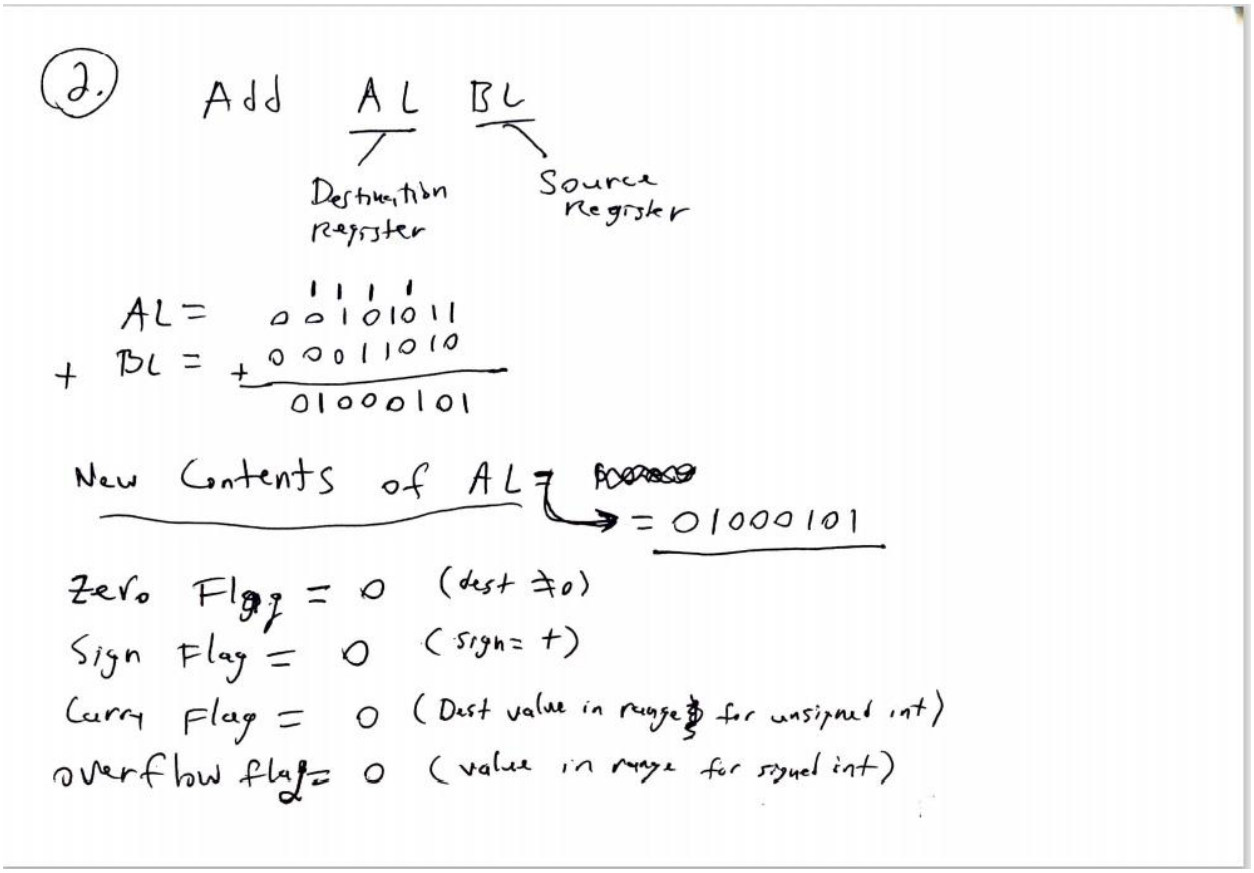


2. Figure out the following FLAGs after the execution of the following instruction: Z,S,O,C.

Assume data registers AL has 00101011 and BL 00011010.

ADD AL. BL (10 points)

Show the contents of AL after the execution of the instruction and figure out Z, S, O and C.

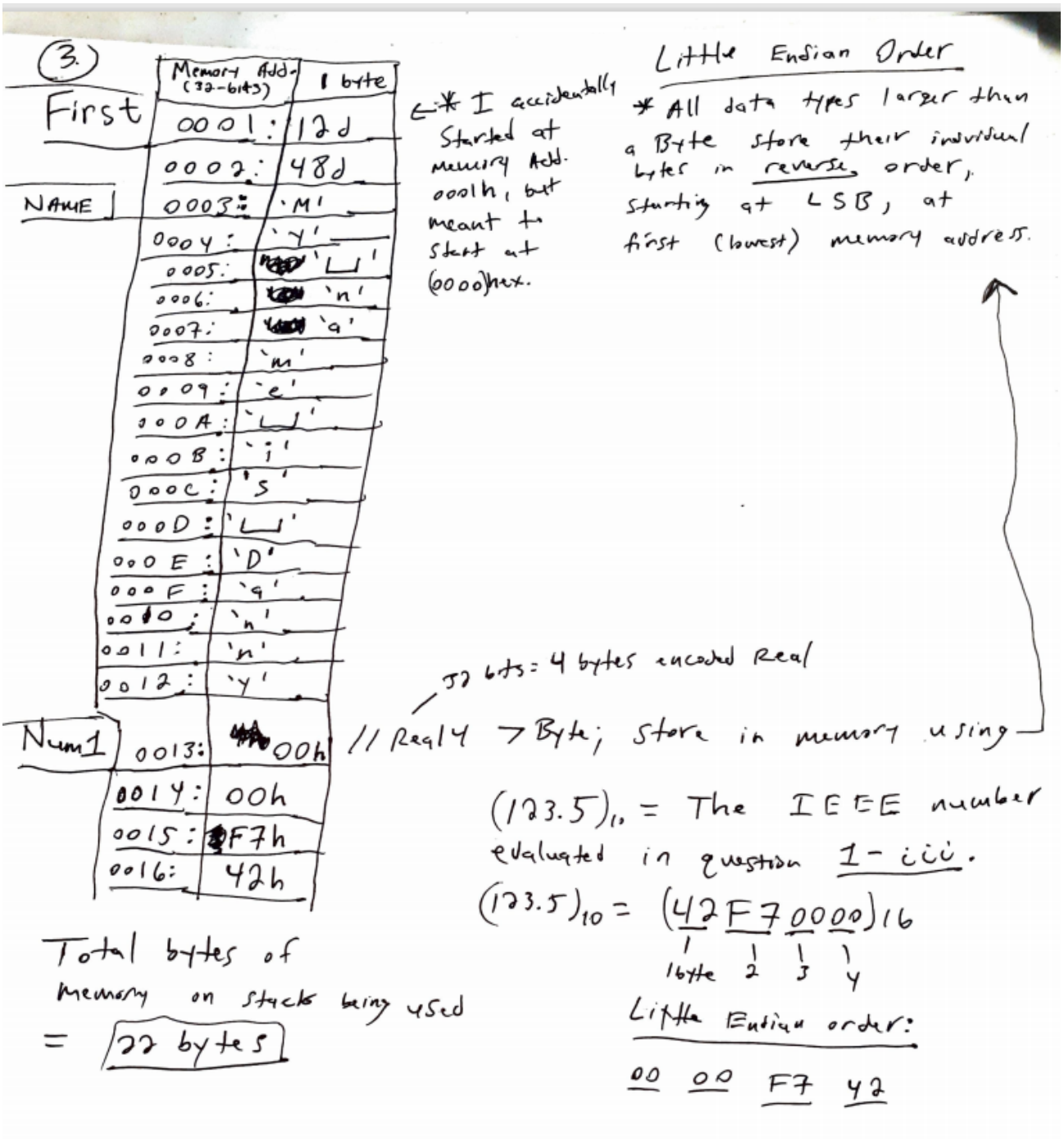


3. Draw the memory map of the following data: (put one byte in each cell) (25 points).

note that the _ character in my map refers to the space ‘ ’ character.

```
.DATA
First       BYTE        12, 48

Name        BYTE        ‘My name is Danny’
Num1        REAL4       123.5
```



4. Write program segment in X86 assembly language to compute 5 x 4 (10 points).

- **I wrote my program in visual studio and ran it to make sure it worked and it did!(:**

```
;CIS-350 SUMMER 2021 WITH PROFESSOR DAVID YOON
;Name: Demetrius Johnson
;Date: 6-06-21
;Program Description: EXAM I Question 4: write a program that computes 5x4


.386
.model flat,stdcall
.stack 4096
ExitProcess proto,dwExitCode:dword

.DATA

.CODE
main proc

mov al, 5d    ;move 5 into al 8-bit register 05h = 5d
mov bl, 4d    ;move 4 into bl 8-bit register 04h = 4d
mul bl       ;multiply al * bl --> it will be stored in the 16-bit AX register 0014h =20d



      invoke ExitProcess,0
main endp
   end main
```

Table 1.1 The ASCII character code

		0 000	1 001	2 010	3 011	4 100	5 101	6 110	7 111
0	0000	NUL	DLC	SP	0	@	P	‘	p
1	0001	SOH	DC1	!	1	A	Q	a	q
2	0010	STX	DC2	“	2	B	R	b	r
3	0011	ETX	DC3	#	3	C	S	c	s
4	0100	EOT	DC4	$	4	D	T	d	t
5	0101	ENQ	NAK	%	5	E	U	e	u
6	0110	ACK	SYN	&	6	F	V	f	v
7	0111	BEL	ETB	‘	7	G	W	g	w
8	1000	BS	CAN	(	8	H	X	h	x
9	1001	HT	EM	)	9	I	Y	i	y
A	1010	LF	SUB	*	:	J	Z	j	z
B	1011	VT	ESC	+	;	K	[	k	{
C	1100	FF	FS	,	<	L	\	l	|
D	1101	CR	GS	-	=	M	]	m	}
E	1110	SO	RS	.	>	N	^	n	~
F	1111	SI	US	/	?	O	_	o	DEL