EE 1910

Dr. Johnson

Final

1 – 1D array element access	10pts
2 – Write a fn to manipulate a 1d array	10pts
3 – 2D array element access	10pts
4 – Write a fn to manipulate a multi-dimensional array	10pts
5 – Write a function	10pts
6 – Write an entire program	15pts
7 – Evaluate the code	10pts
8 – Evaluate the code	10pts
9 – Lab coding	10pts
10 – Port Access	10pts
11 – Hardware	10pts
12 – Terminology	15pts
Extra Credit	5 pts

C – Operator Precedence

Precedence	Operator	Description	Associativity
1	++ --	Suffix/postfix increment and decrement	Left-to-right
	()	Function call	
	[]	Array subscripting	
	.	Structure and union member access	
	->	Structure and union member access through pointer	
	(type){list}	Compound literal(C99)	
2	++ --	Prefix increment and decrement	Right-to-left
	+ -	Unary plus and minus	
	! ~	Logical NOT and bitwise NOT	
	(type)	Type cast	
	*	Indirection (dereference)	
	&	Address-of	
	sizeof	Size-of	
	_Alignof	Alignment requirement(C11)	
3	* / %	Multiplication, division, and remainder	Left-to-right
4	+ -	Addition and subtraction	
5	<< >>	Bitwise left shift and right shift	
6	< <=	For relational operators < and ≤ respectively	
	> >=	For relational operators > and ≥ respectively	
7	== !=	For relational = and ≠ respectively	
8	&	Bitwise AND	
9	^	Bitwise XOR (exclusive or)	
10	|	Bitwise OR (inclusive or)	
11	&&	Logical AND	
12	||	Logical OR	
13	?:	Ternary conditional	Right-to-Left
14	=	Simple assignment	
	+= -=	Assignment by sum and difference	
	*= /= %=	Assignment by product, quotient, and remainder	
	<<= >>=	Assignment by bitwise left shift and right shift	
	&= ^= |=	Assignment by bitwise AND, XOR, and OR	
15	,	Comma	Left-to-right

ASCII TABLE

Decimal	Hexadecimal	Binary	Octal	Char	Decimal	Hexadecimal	Binary	Octal	Char	Decimal	Hexadecimal	Binary	Octal	Char
0	0	0	0	[NULL]	48	30	110000	60	0	96	60	1100000	140	`
1	1	1	1	[START OF HEADING]	49	31	110001	61	1	97	61	1100001	141	a
2	2	10	2	[START OF TEXT]	50	32	110010	62	2	98	62	1100010	142	b
3	3	11	3	[END OF TEXT]	51	33	110011	63	3	99	63	1100011	143	c
4	4	100	4	[END OF TRANSMISSION]	52	34	110100	64	4	100	64	1100100	144	d
5	5	101	5	[ENQUIRY]	53	35	110101	65	5	101	65	1100101	145	e
6	6	110	6	[ACKNOWLEDGE]	54	36	110110	66	6	102	66	1100110	146	f
7	7	111	7	[BELL]	55	37	110111	67	7	103	67	1100111	147	g
8	8	1000	10	[BACKSPACE]	56	38	111000	70	8	104	68	1101000	150	h
9	9	1001	11	[HORIZONTAL TAB]	57	39	111001	71	9	105		1101001	151	i
10	A	1010	12	[LINE FEED]	58	3A	111010	72	:	106		1101010	152	j
11	B	1011	13	[VERTICAL TAB]	59	3B	111011	73	;			1101011	153	k
12	C	1100	14	[FORM FEED]	60	3C	111100	74	<		6C	1101100	154	l
13	D	1101	15	[CARRIAGE RETURN]	61	3D	111101				6D	1101101	155	m
14	E	1110	16	[SHIFT OUT]	62	3E	111110	76	>	110	6E	1101110	156	n
15	F	1111	17	[SHIFT IN]	63	3F	111111			111	6F	1101111	157	o
16	10	10000	20	[DATA LINK ESCAPE]	64	40	000000		@	112	70	1110000	160	p
17	11	10001	21	[DEVICE CONTROL 1]	65	41	0001	101	A	113	71	1110001	161	q
18	12	10010	22	[DEVICE CONTROL 2]	66	42	010	102	B	114	72	1110010	162	r
19	13	10011	23	[DEVICE CONTROL 3]	67	43	000011	103	C	115	73	1110011	163	s
20	14	10100	24	[DEVICE CONTROL 4]	68	44	1000100	104	D	116	74	1110100	164	t
21	15	10101	25	[NEGATIVE ACKNOWLEDGE]	69	45	1000101	105	E	117	75	1110101	165	u
22	16	10110	26	[SYNCHRONOUS IDL		46	1000110	106	F	118	76	1110110	166	v
23	17	10111	27	[ENG OF TRANS		47	1000111	107	G	119	77	1110111	167	w
24	18	11000	30	[CANCEL	72	48	1001000	110	H	120	78	1111000	170	x
25	19	11001	31	[END OF	73	49	1001001	111	I	121	79	1111001	171	y
26	1A	11010	32	[	74	4A	1001010	112	J	122	7A	1111010	172	z
27	1B	11010		[E AP	75	4B	1001011	113	K	123	7B	1111011	173	{
28	1C			[F SEPARATOR]	76	4C	1001100	114	L	124	7C	1111100	174		
29	1D			GROUP SEPARATOR]	77	4D	1001101	115	M	125	7D	1111101	175	}
30	1E	110	3	[RECORD SEPARATOR]	78	4E	1001110	116	N	126	7E	1111110	176	~
31	1F	111	37	[UNIT SEPARATOR]	79	4F	1001111	117	O	127	7F	1111111	177	[DEL]
32	20	100000	40	[SPACE]	80	50	1010000	120	P					
33	21	100001	41	!	81	51	1010001	121	Q					
34	22	100010	42	"	82	52	1010010	122	R					
35	23	100011	43	#	83	53	1010011	123	S					
36	24	100100	44	$	84	54	1010100	124	T					
37	25	100101	45	%	85	55	1010101	125	U					
38	26	100110	46	&	86	56	1010110	126	V					
39	27	100111	47	'	87	57	1010111	127	W					
40	28	101000	50	(	88	58	1011000	130	X					
41	29	101001	51	)	89	59	1011001	131	Y					
42	2A	101010	52	*	90	5A	1011010	132	Z					
43	2B	101011	53	+	91	5B	1011011	133	[					
44	2C	101100	54	,	92	5C	1011100	134	\					
45	2D	101101	55	-	93	5D	1011101	135	]					
46	2E	101110	56	.	94	5E	1011110	136	^					
47	2F	101111	57	/	95	5F	1011111	137	_					

Provided on Exam