

1. Draw the flow chart for the `if-elif-else` statement that implements the table:

Temperature	String
<code>temperature < 0</code>	"Its bitterly cold!"
<code>0 <= temperature <= 32</code>	"Its freezing outside."
<code>32 < temperature < 68</code>	"Light jacket weather."
<code>68 <= temperature</code>	"Its warm outside."

2. The precedence for mathematical operators, Boolean operators, and comparisons are given in the table. For each of the expressions, determine if the expression is legal. If it is, determine the order of operations:

	Operator(s)
highest ↑	<code>+, - (unary)</code>
	<code>**</code>
	<code>*, /, %</code>
	<code>+, - (add, sub)</code>
	<code><, >, ==, <=, >=, !=, <>, is, is not</code>
lowest	<code>not</code>
	<code>and</code>
	<code>or</code>

a) `x + 5 < y**2 and not y >= 6`

b) `not x < 8 or 3y >= 10`

3. How would you compare strings to see if they are in alphabetic order?

ASCII Character Representation

0	NUL	16	DLE	32		48	0	64	@	80	P	96	`	112	p
1	SOH	17	DC1	33	!	49	1	65	A	81	Q	97	a	113	q
2	STX	18	DC2	34	"	50	2	66	B	82	R	98	b	114	r
3	ETX	19	DC3	35	#	51	3	67	C	83	S	99	c	115	s
4	EOT	20	DC4	36	\$	52	4	68	D	84	T	100	d	116	t
5	ENQ	21	NAK	37	%	53	5	69	E	85	U	101	e	117	u
6	ACK	22	SYN	38	&	54	6	70	F	86	V	102	f	118	v
7	BEL	23	ETB	39	'	55	7	71	G	87	W	103	g	119	w
8	BS	24	CAN	40	(	56	8	72	H	88	X	104	h	120	x
9	HT	25	EM	41	)	57	9	73	I	89	Y	105	i	121	y
10	LF	26	SUB	42	*	58	:	74	J	90	Z	106	j	122	z
11	VT	27	ESC	43	+	59	;	75	K	91	[	107	k	123	{
12	FF	28	FS	44	,	60	<	76	L	92	\	108	l	124	|
13	CR	29	GS	45	-	61	=	77	M	93	]	109	m	125	}
14	SO	30	RS	46	.	62	>	78	N	94	^	110	n	126	~
15	SI	31	US	47	/	63	?	79	O	95	_	111	o	127	DEL

Abbreviations

NUL	Null	DLE	Data link escape
SOH	Start of heading	DC1	Device control 1
STX	Start of text	DC2	Device control 2
ETX	End of text	DC3	Device control 3
EOT	End of transmission	DC4	Device control 4
ENQ	Enquiry	NAK	Negative acknowledge
ACK	Acknowledge	SYN	Synchronous idle
BEL	Bell (beep)	ETB	End of transmission block
BS	Backspace	CAN	Cancel
HT	Horizontal tab	EM	End of medium
LF	Line feed, new line	SUB	Substitute
VT	Vertical tab	ESC	Escape
FF	Form feed, new page	FS	File separator
CR	Carriage return	GS	Group separator
SO	Shift out	RS	Record separator
SI	Shift in	US	Unit separator
		DEL	Delete/Idle

4. What would the result of the following comparisons?

a) 'catelog' > 'bat'

b) 'abcdef' < 'abc123'

c) 'Mark' < 'bat'

5. Write code using a while statement that allows the user to enter a timer value and prints values down to "BLAST OFF!!!".