LAB 7

2017. 07. 27

ASCII CODE

10진수	부호	10진수	부호	10진수	부호	10진수	부호
032		056	8	080	P	104	h
033	!	057	9	081	Q	105	i
034	"	058	:	082	R	106	j
035	#	059	;	083	S	107	k
036	$	060	<	084	T	108	l
037	%	061	=	085	U	109	m
038	&	062	>	086	V	110	n
039	'	063	?	087	W	111	o
040	(	064	@	088	X	112	p
041	)	065	A	089	Y	113	q
042	*	066	B	090	Z	114	r
043	+	067	C	091	[	115	s
044	,	068	D	092	\	116	t
045	-	069	E	093	]	117	u
046	.	070	F	094	^	118	v
047	/	071	G	095	_	119	w
048	0	072	H	096	`	120	x
049	1	073	I	097	a	121	y
050	2	074	J	098	b	122	z
051	3	075	K	099	c	123	{
052	4	076	L	100	d	124	|
053	5	077	M	101	e	125	}
054	6	078	N	102	f	126	~
055	7	079	O	103	g		

Example

```
>>ord ('I')
73
>>chr(73)
I
```

EXERCISE

1. Blend three sound.

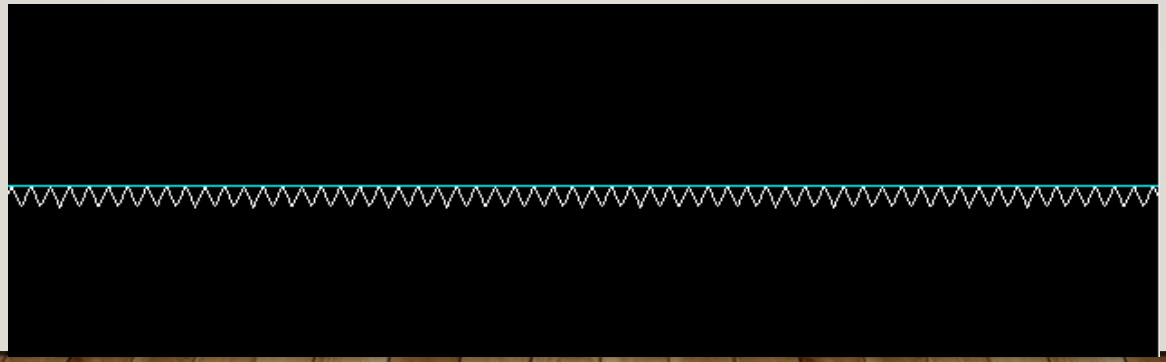
(use bassoon-c4.wav, bassoon-e4.wav, and bassoon-g4.wav)

- Start with part of the sound1 (1/4)
- Blend sound1 and sound 2 (2/4)
- Blend sound 2 and sound 3 (3/4)
- End with the rest of sound 3 (4/4)

EXERCISE

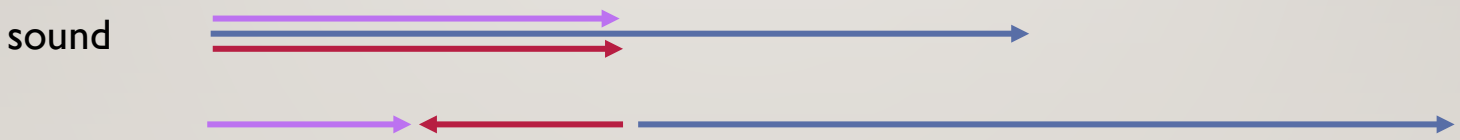
2. Write a function that inputs a frequency, a maximum amplitude, and length in seconds. Using the inputs, create a triangular waves. (Hint: square waves)
   - Sampling Rate = 22050
   - makeEmptySoundBySeconds

e.g.,) explore(triangleWave(60, 4000, 3))



EXERCISE: HIP-HOP DJ

3. Try combining backwards play and doubling the frequency of a sound. (use backpack.wav)
   - Double the frequency of the first part.
   - Reverse the first part and double its frequency.
   - End with the input sound.



EXERCISE: STEGANOGRAPHY

4. Decode the sound. A string is encoded by the XOR operation with sound.

Download steg.wav and use c4.wav

(Hint: 7 XOR 4 XOR 7 = 4)