ChucK

My Friend for Programming Music

ORACLE CODE

Mercedes Wyss

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Community Leader

Devs+502 & JDuchess Chapter Guatemala

Ex-JUG Member

Guatemala Java Users Group (GuateJUG)

Chief Technology Officer (CTO) at Produactivity

Full Stack Developer

Auth0 Ambassador &

Oracle Groundbreaker Ambassador

Oracle Groundbreaker Ambassador

Devs +502

Comunidad Desarrolladores en Tecnologías

< Google > en Guatemala

Duke's Choice Award

2016 Winner

Java™

AMBASSADOR

JDuchess

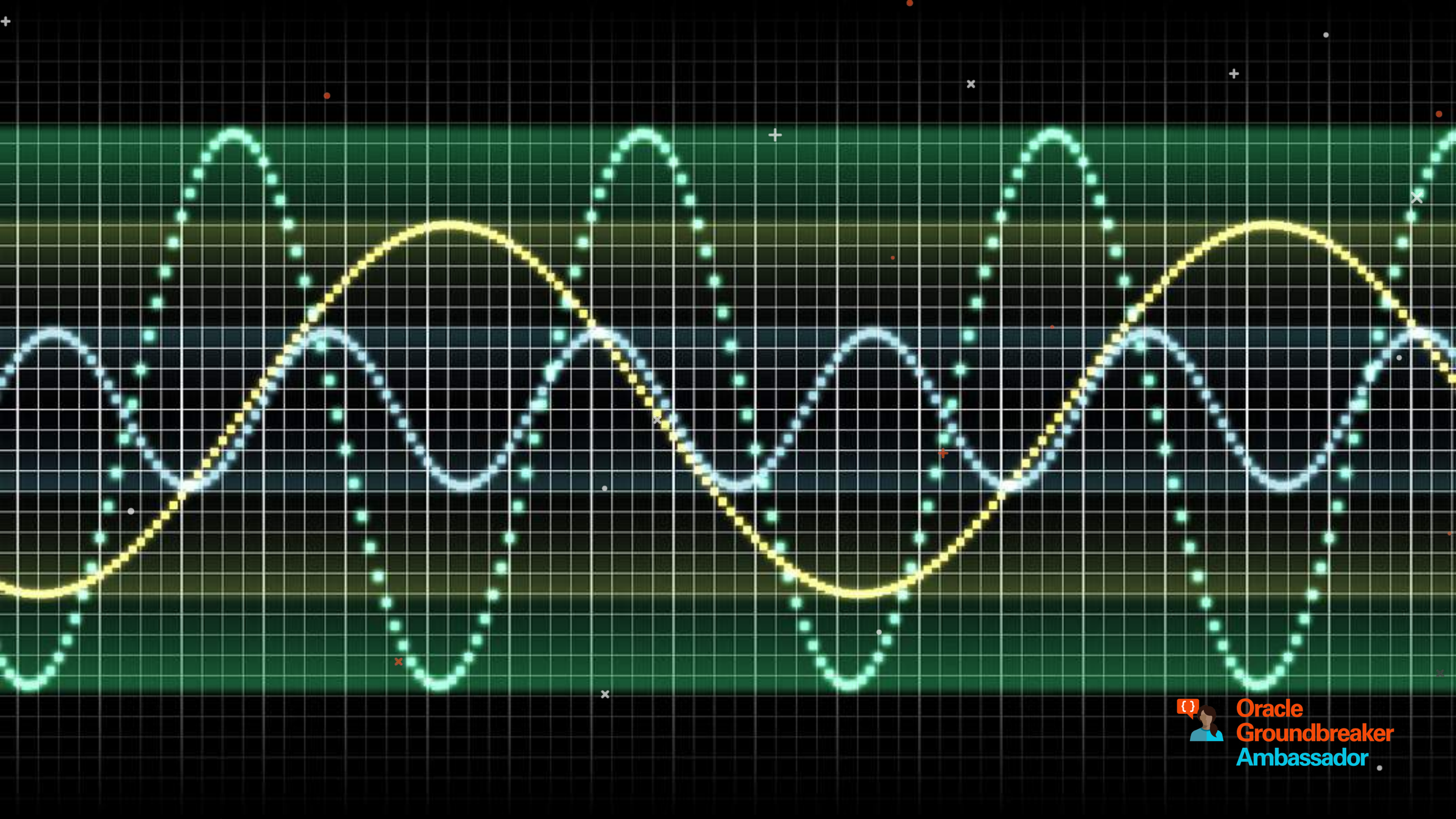
Guatemala

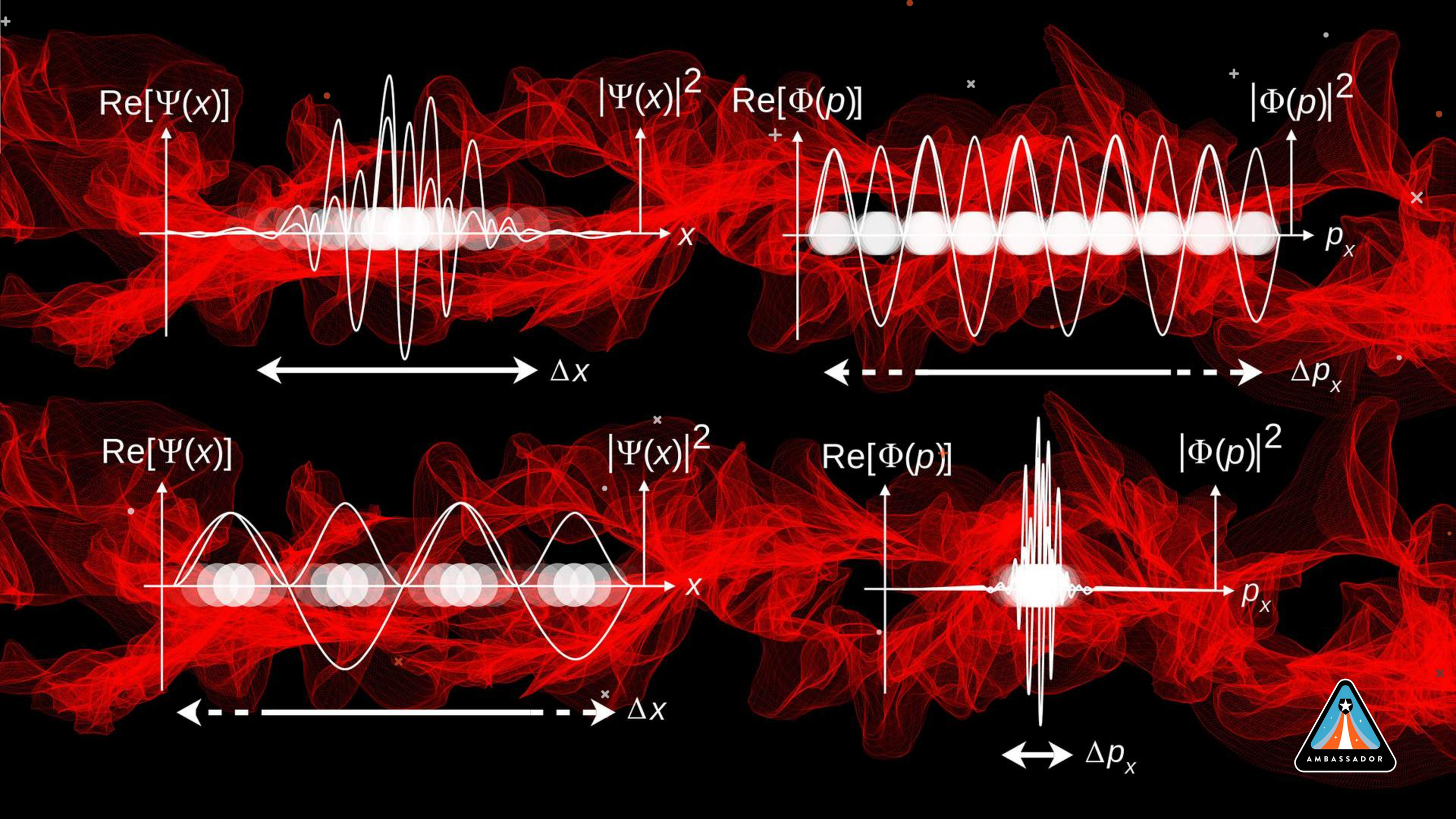
ChucK

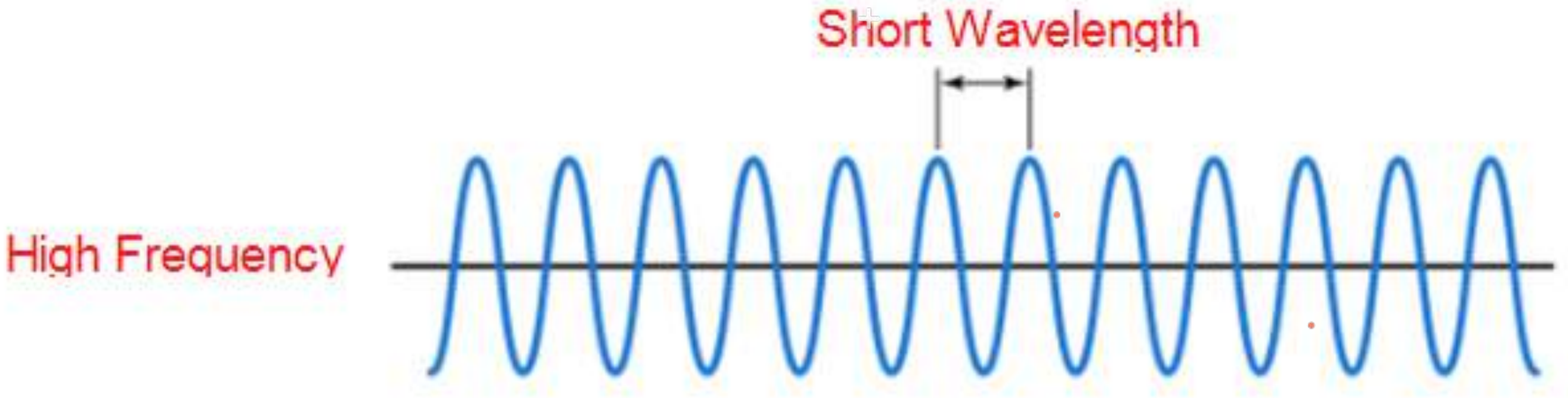
A programming language for sound and music

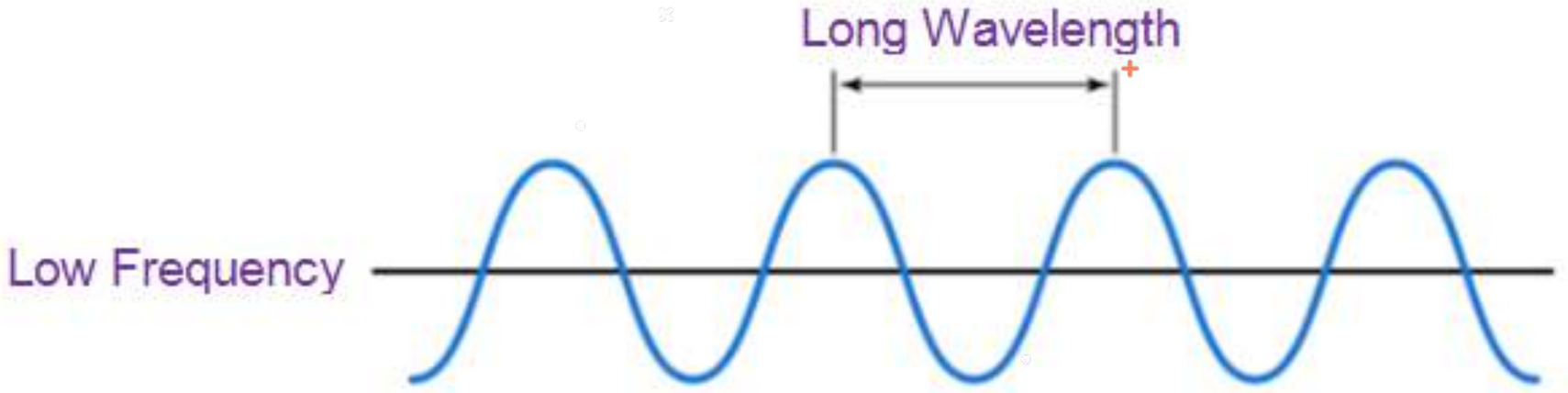
Oracle
Groundbreaker
Ambassador

AMBASSADOR


Oracle
Groundbreaker
Ambassador


Re[Ψ(x)]
|Ψ(x)|2
x
Δx
Re[Φ(p)]
|Φ(p)|2
px
Δpx
Re[Ψ(x)]
|Ψ(x)|2
x
Δx
Re[Φ(p)]
|Φ(p)|2
px
Δpx





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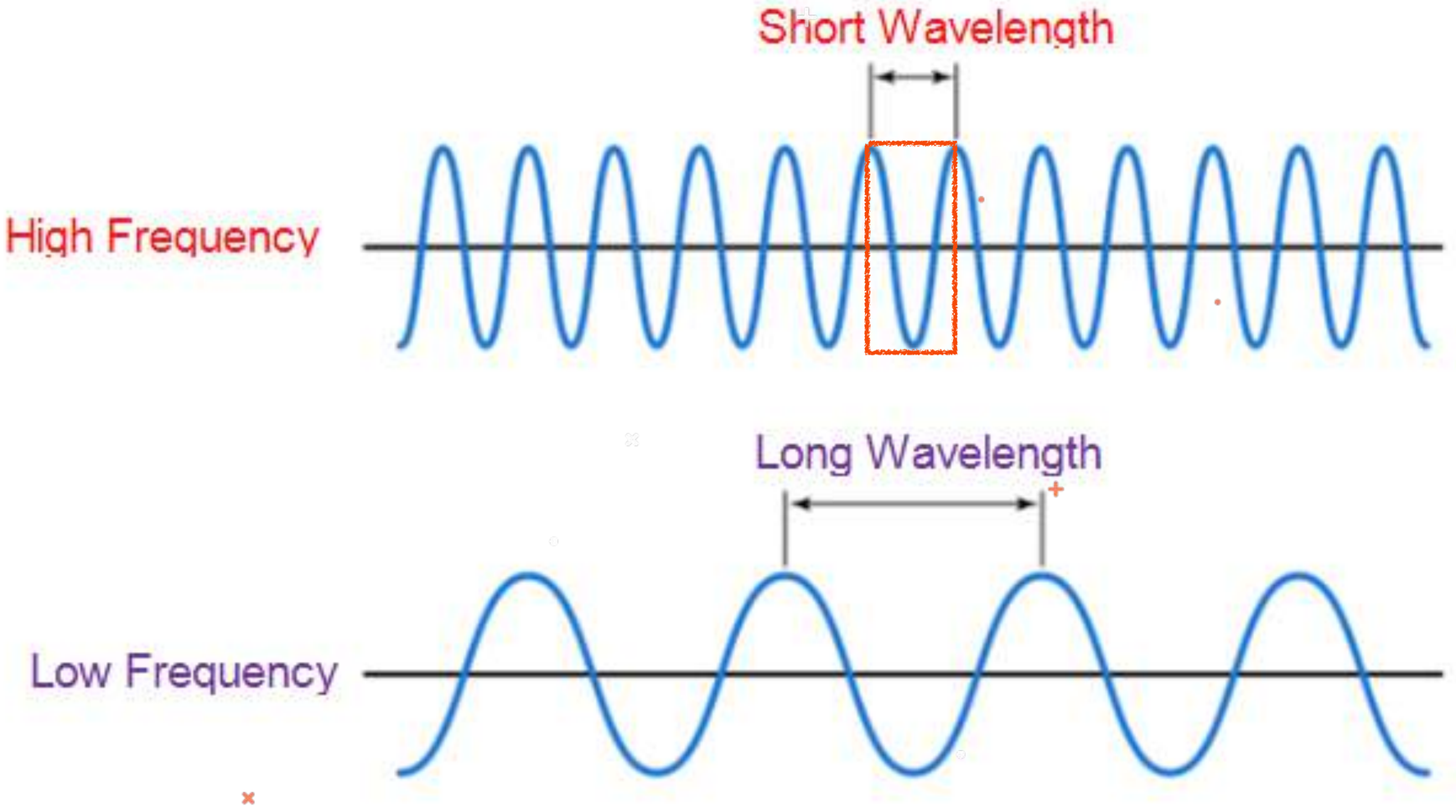
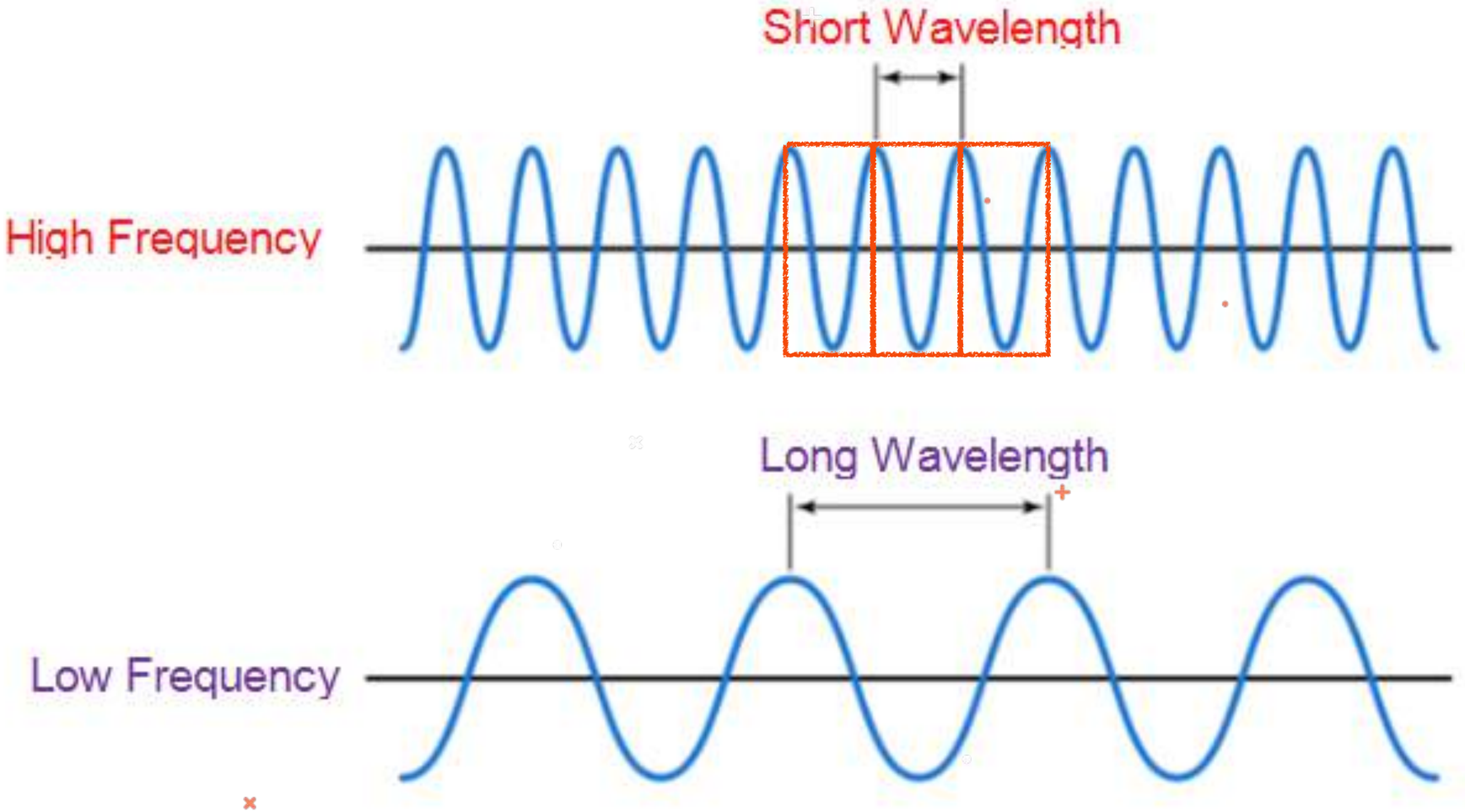
Groundbreaker
Ambassador



Oracle Groundbreaker Ambassador



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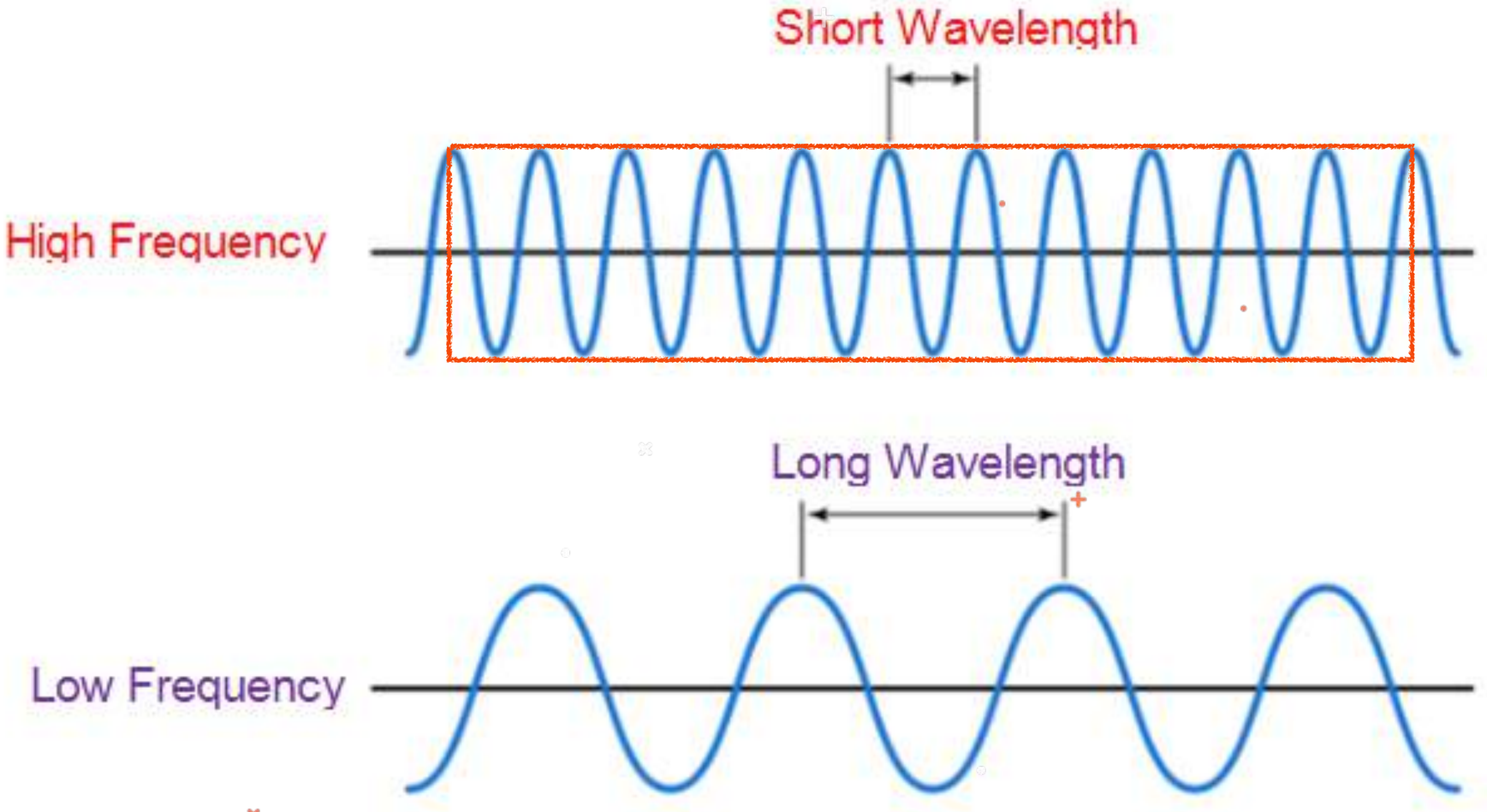

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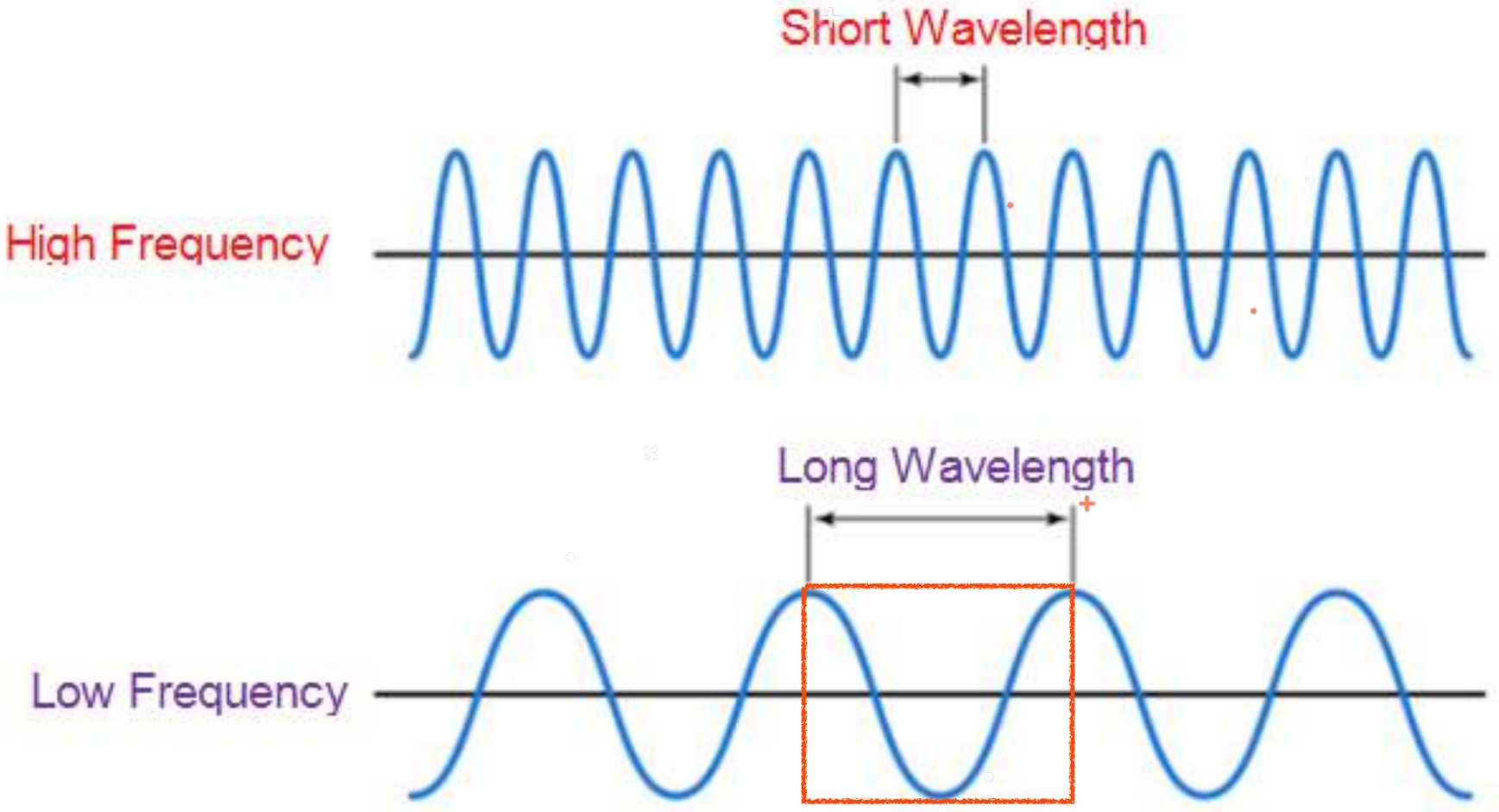

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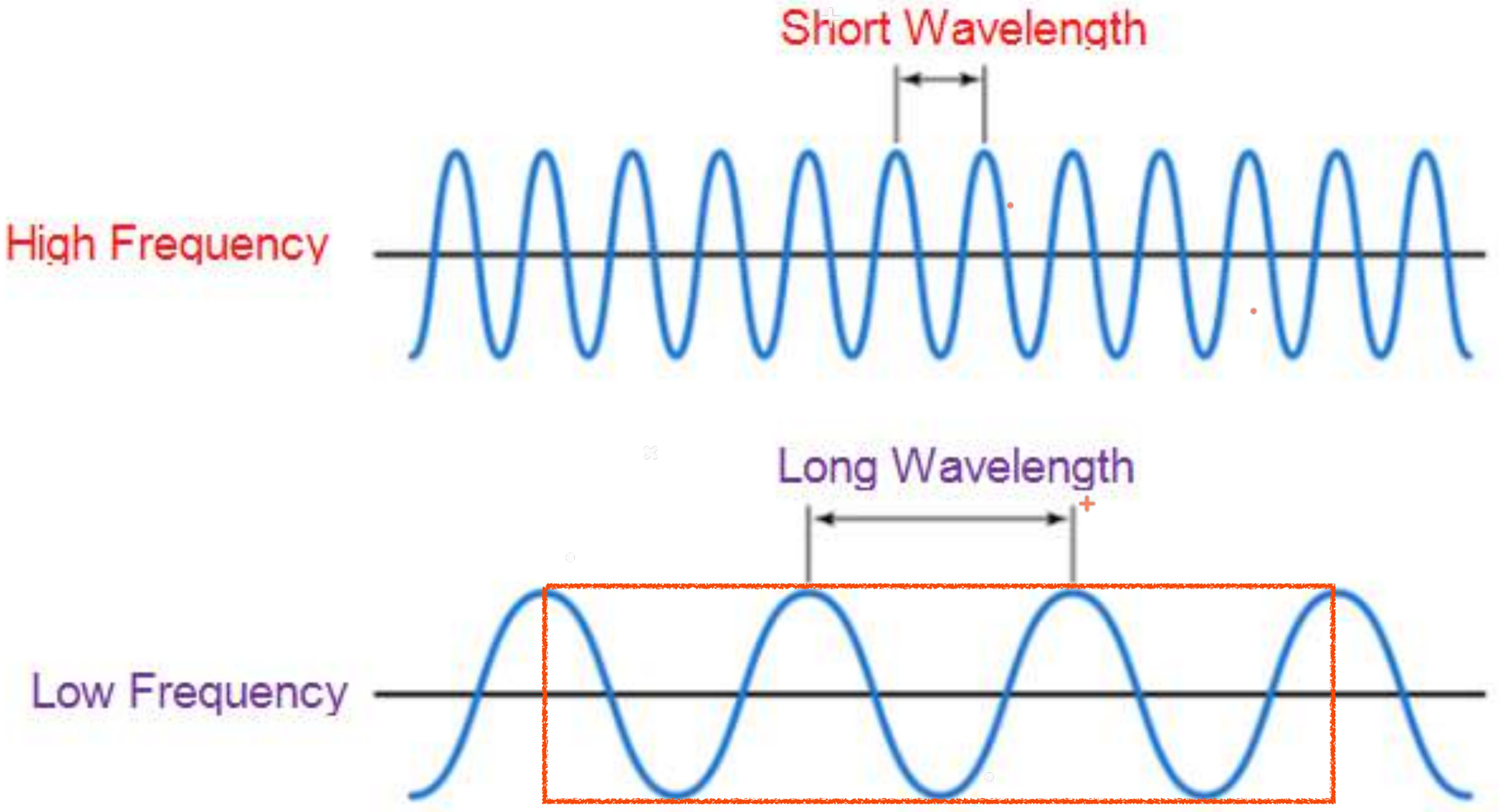

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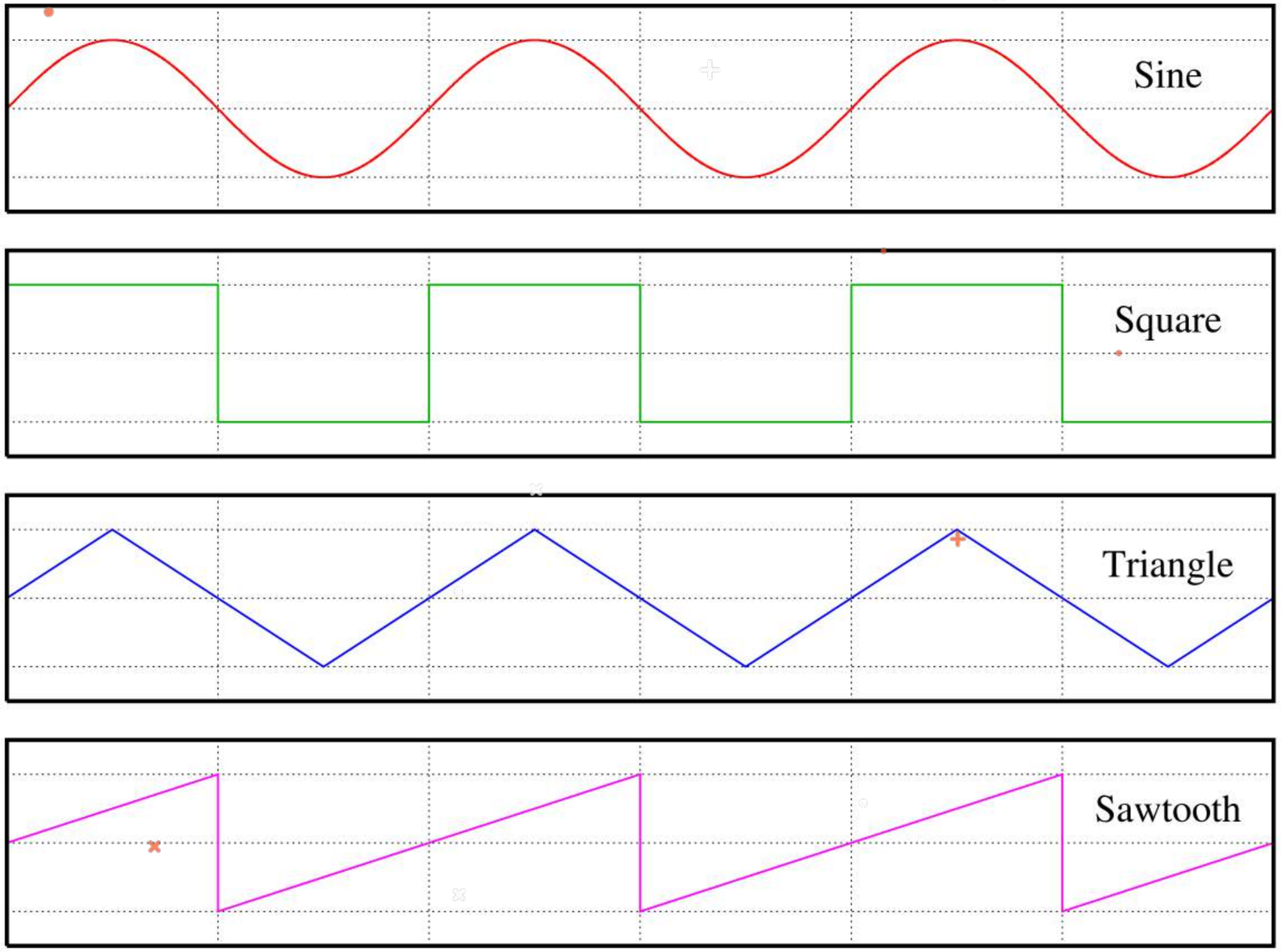

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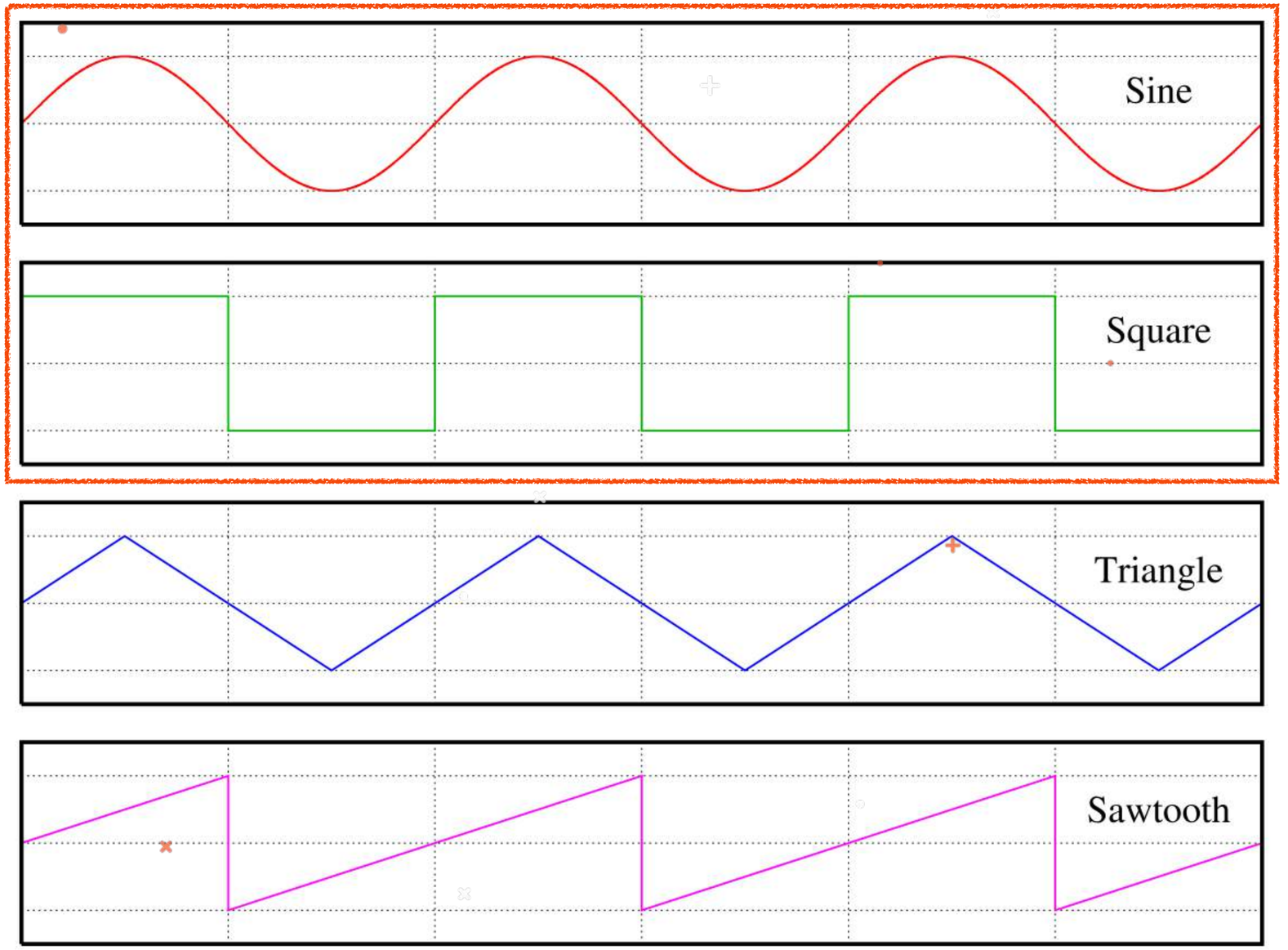

Oracle Groundbreaker Ambassador

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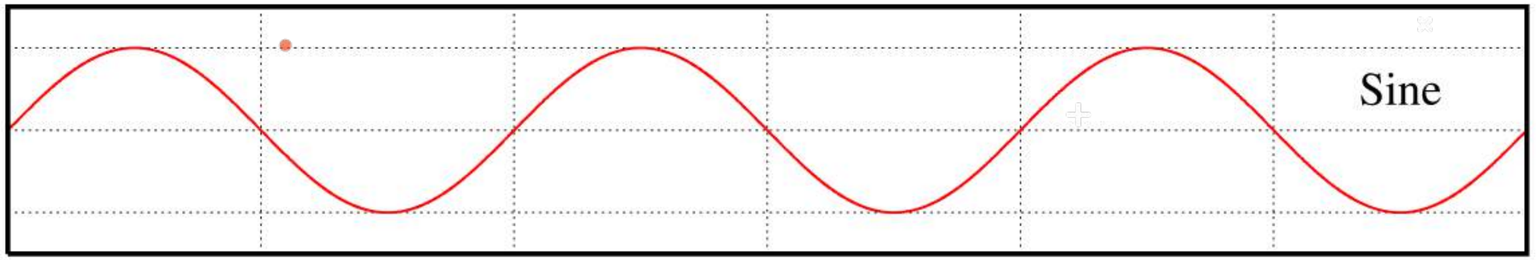
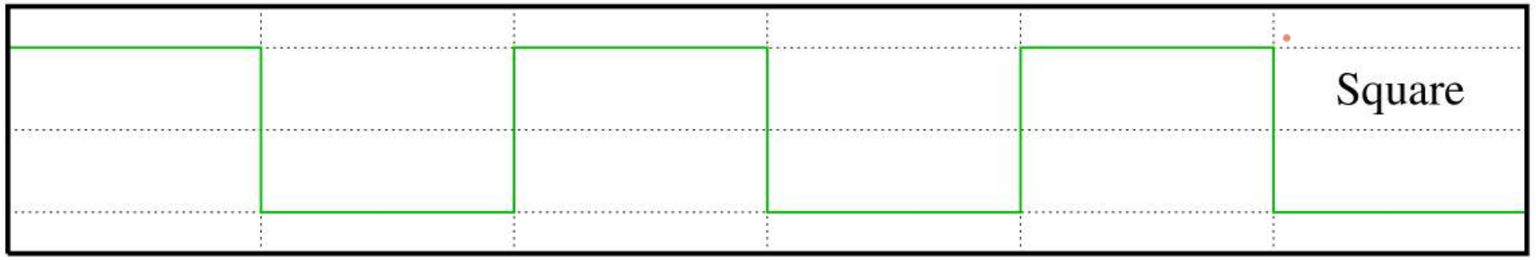
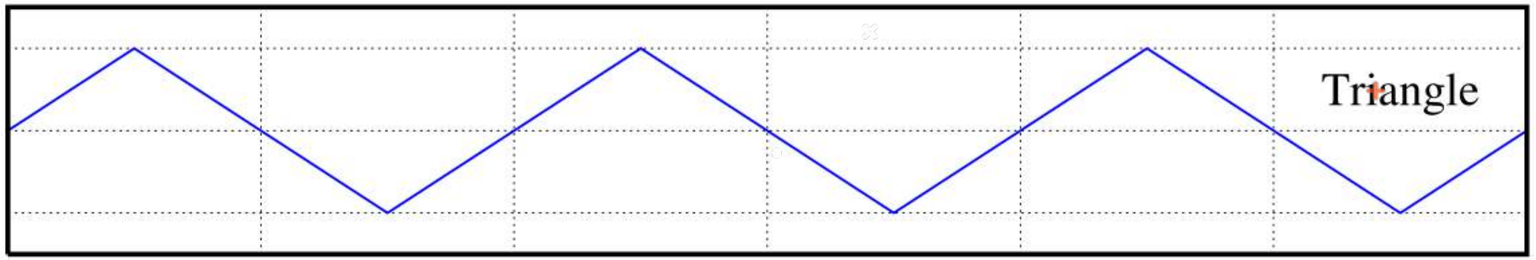


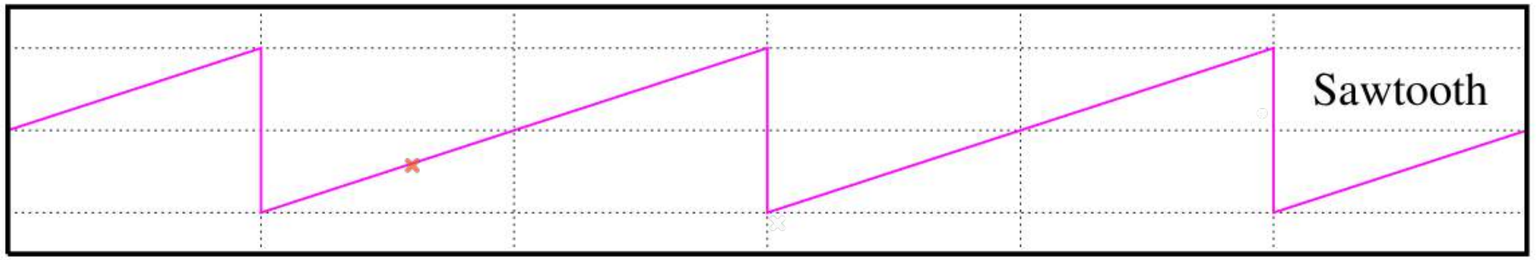
SinOsc



SqrOsc



TriOsc



SawOsc

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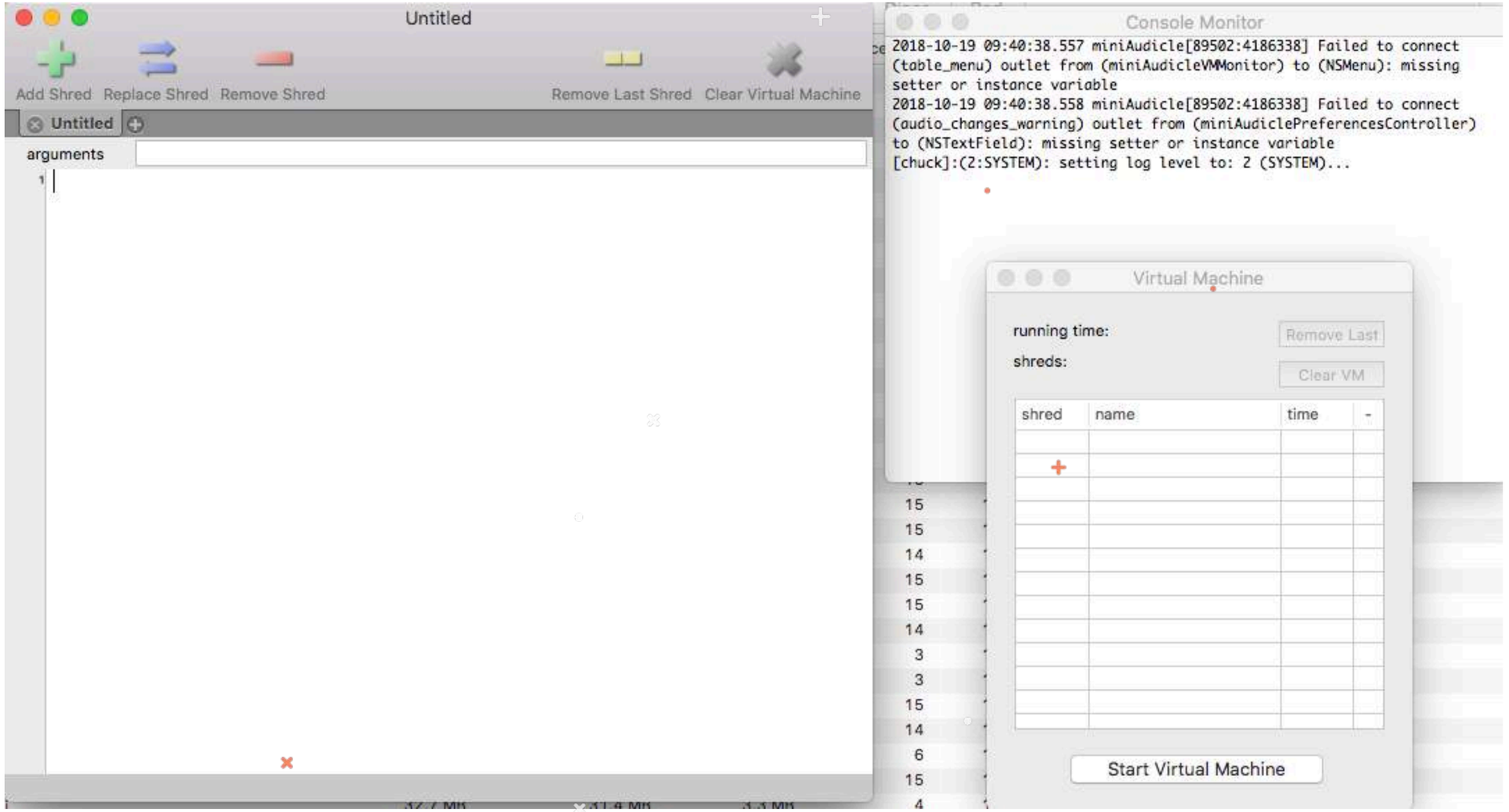
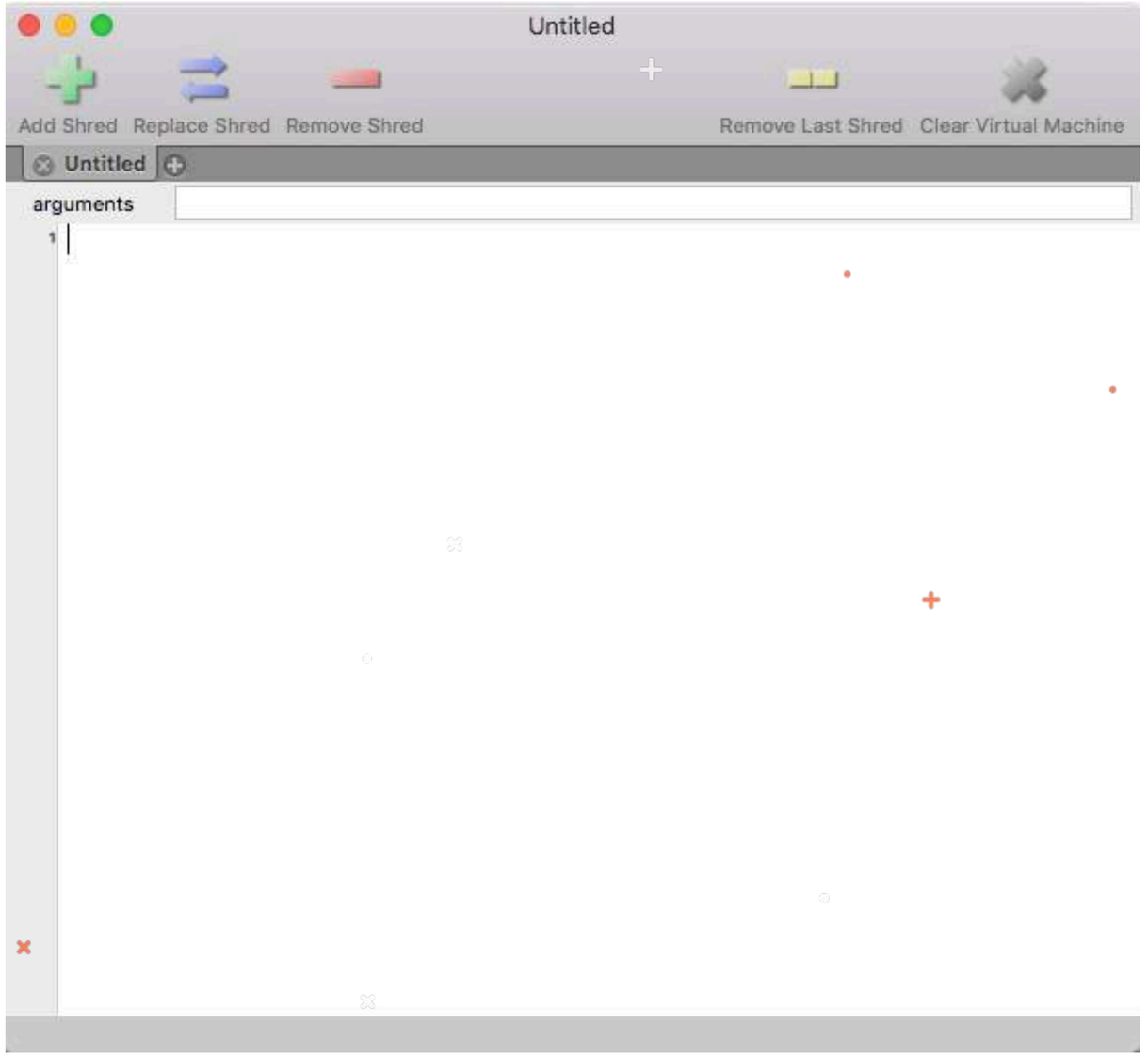
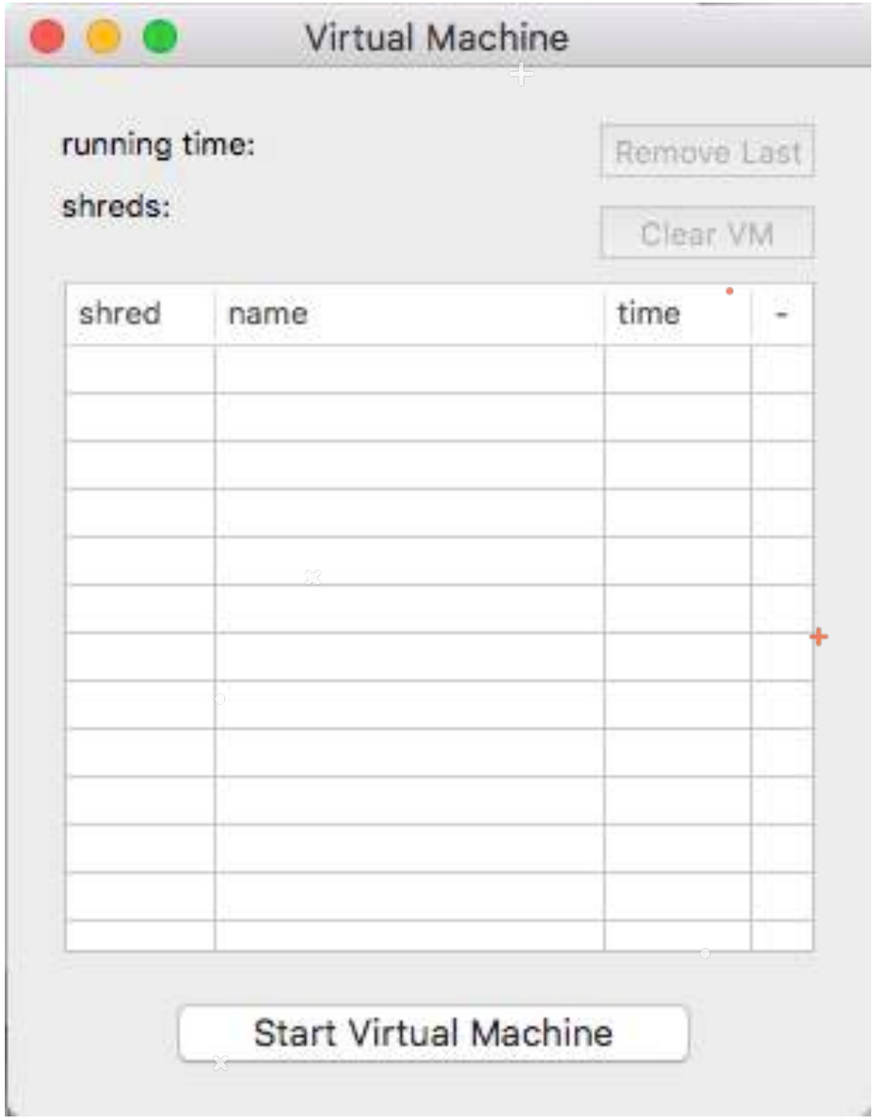
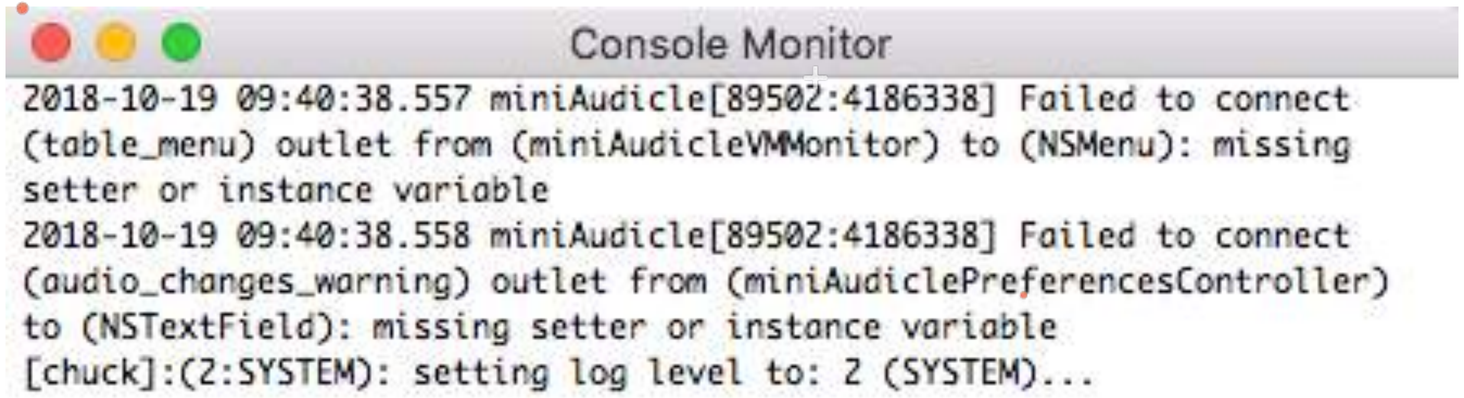

Untitled
Add Shred
Replace Shred
Remove Shred
Remove Last Shred
Clear Virtual Machine
Untitled
arguments
Console Monitor
2018-10-19 09:40:38.557 miniAudicle[89502:4186338] Failed to connect (table_menu) outlet from (miniAudicleVMMonitor) to (NSMenu): missing setter or instance variable
2018-10-19 09:40:38.558 miniAudicle[89502:4186338] Failed to connect (audio_changes_warning) outlet from (miniAudiclePreferencesController) to (NSTextField): missing setter or instance variable
[chuck]:(2:SYSTEM): setting log level to: 2 (SYSTEM)...
Virtual Machine
running time:
shreds:
Remove Last
Clear VM
shred
name
time
Start Virtual Machine

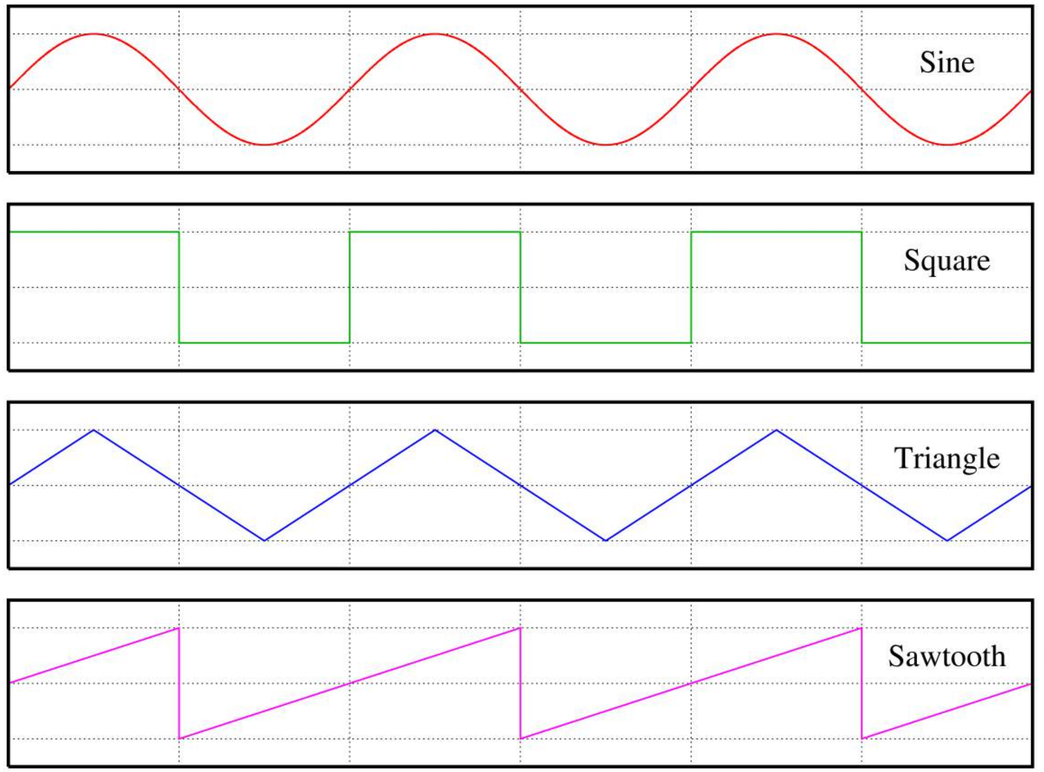


Oracle Groundbreaker Ambassador


Virtual Machine
running time:
shreds:
Remove Last
Clear VM
shred
name
time
-
Start Virtual Machine



Oracle Groundbreaker Ambassador



SinOsc

SqrOsc

TriOsc

SawOsc

Some Practice

We will explore ChucK and all the Oscillators for have sounds with diferente Waveforms

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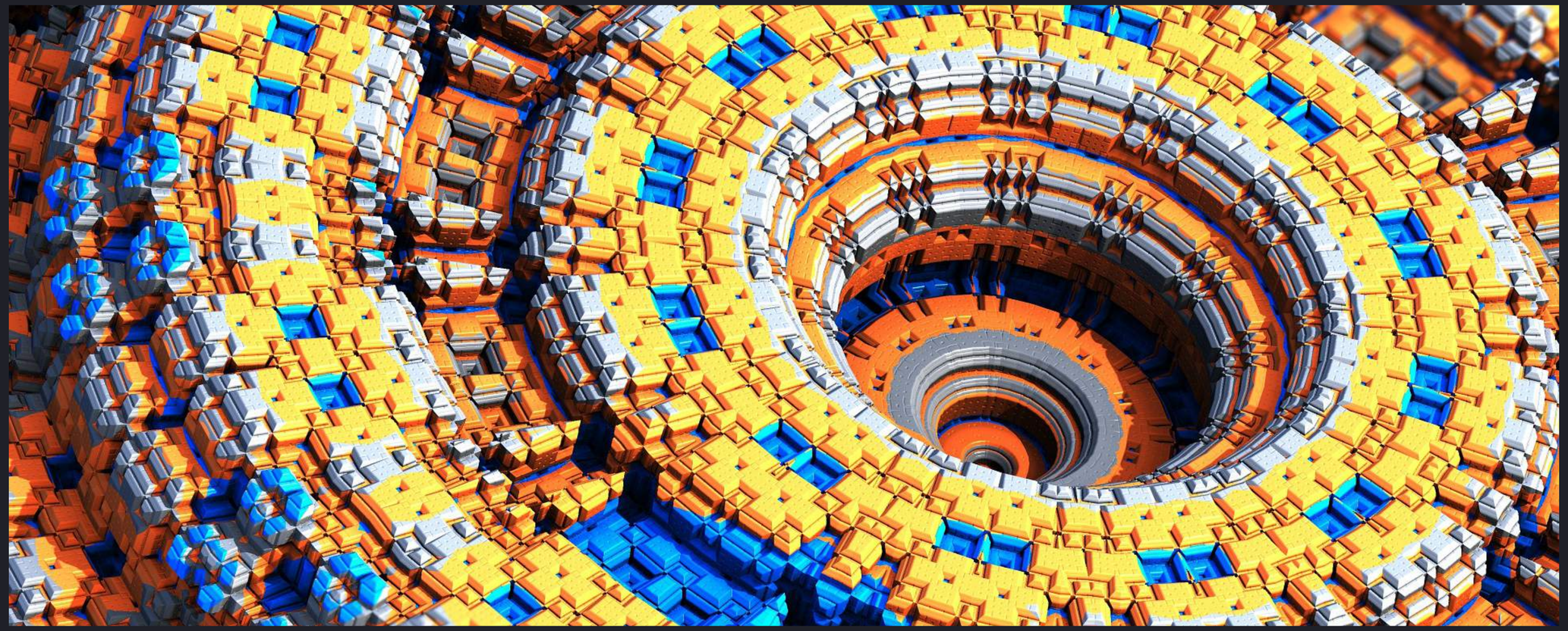

Repetitive structures, works for make a same actions.

Cicles

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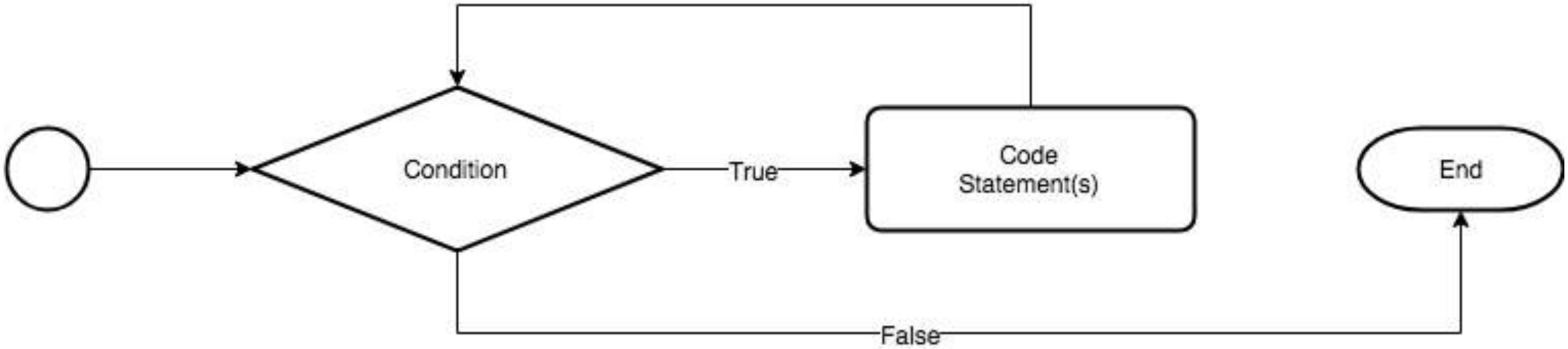
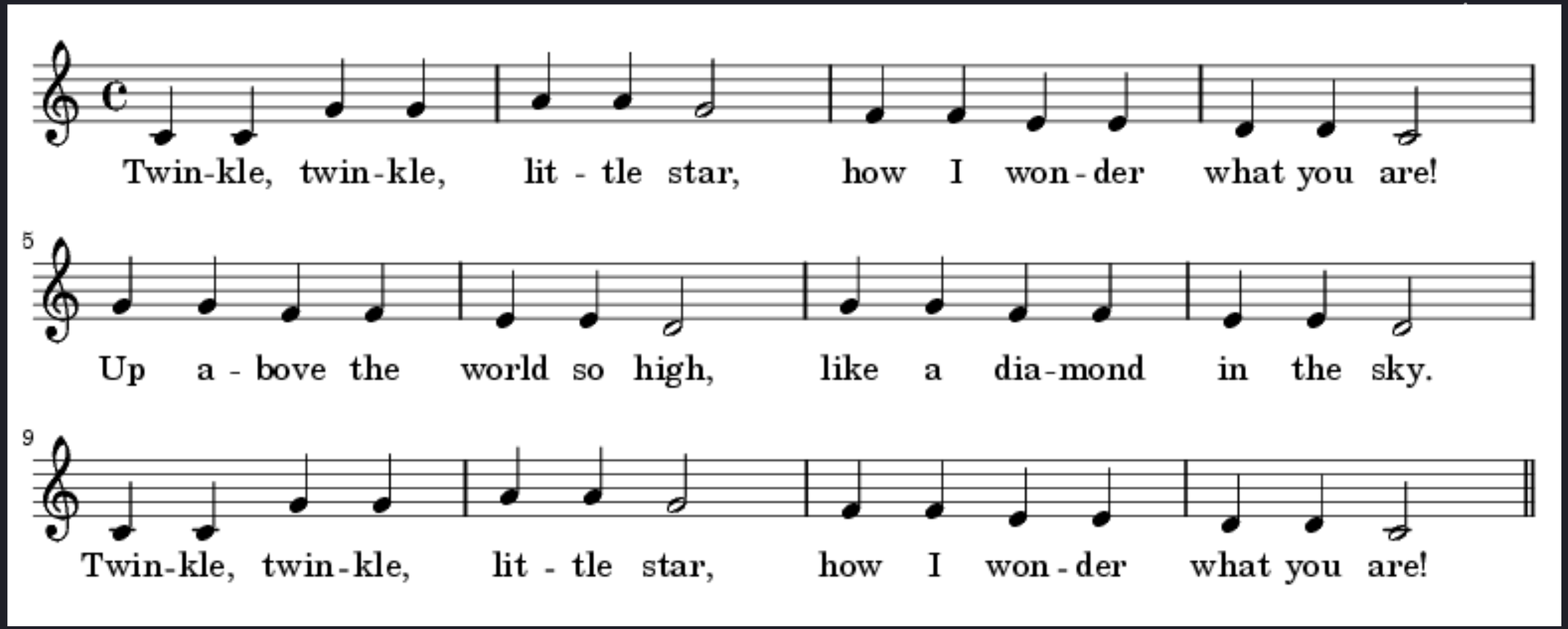
While





How play notes if we manage frequencies?

Twinkle

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C	C	G	G	A	A	G	F	F	E	E	D	D	C

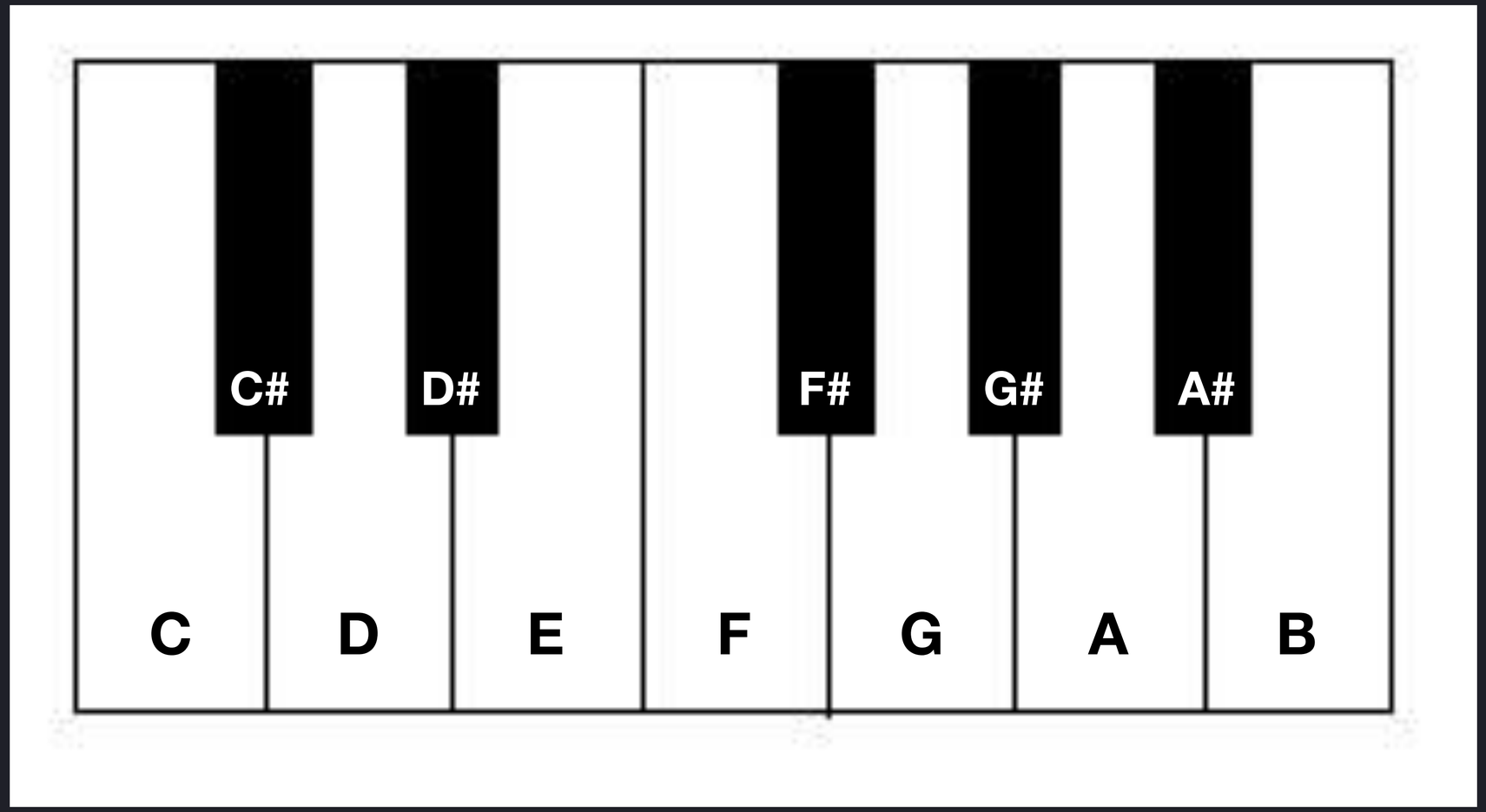
G	G	F	F	E	E	D	G	G	F	F	E	E	D

C	C	G	G	A	A	G	F	F	E	E	D	D	C

Twinkle

How play notes if we manage frequencies?

AMBASSADOR



How play notes if we manage frequencies?

Twinkle

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MIDI

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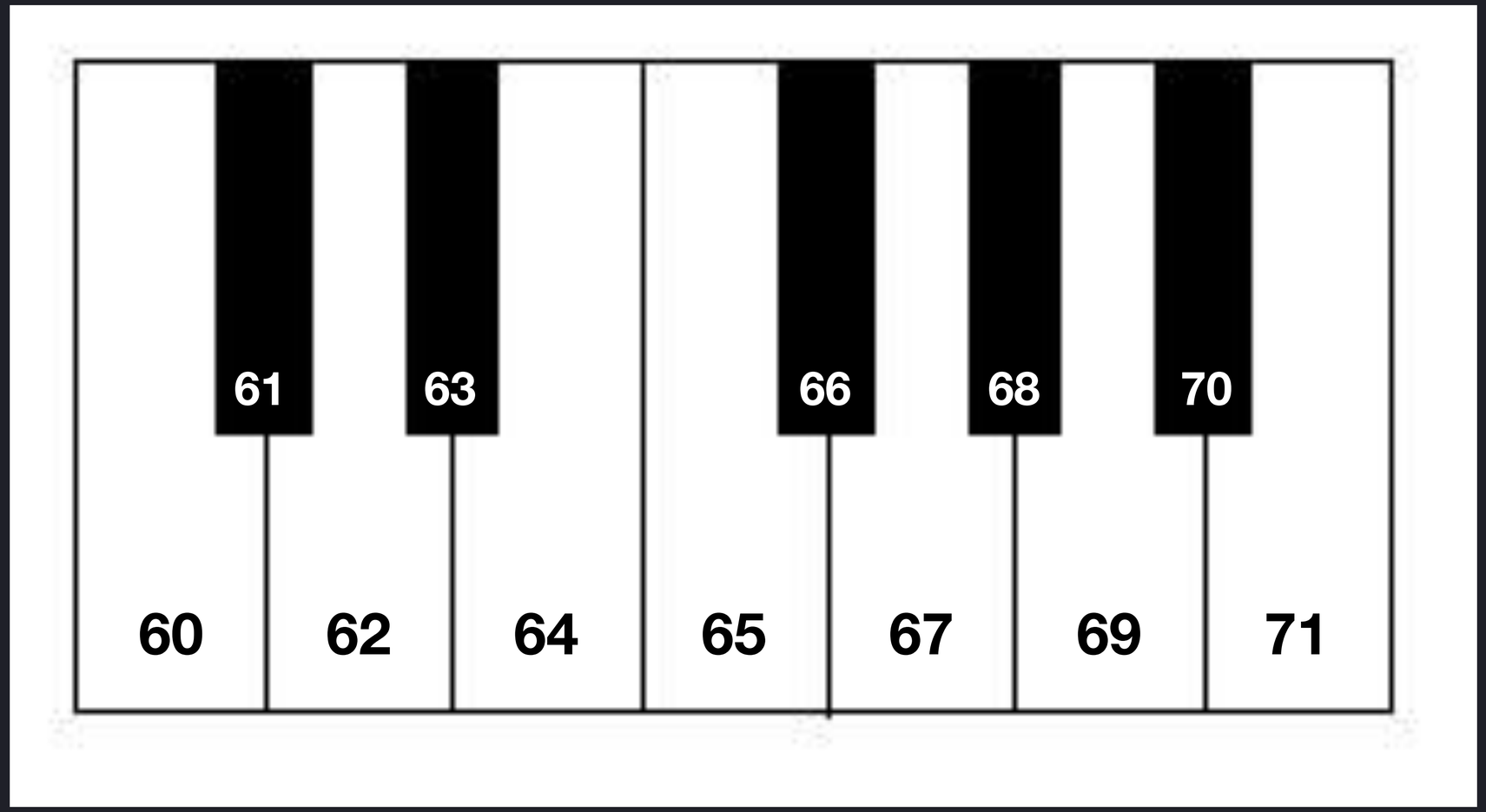

MIDI format use numbers for represent each note

MIDI Notes

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C	C	G	G	A	A	G	F	F	E	E	D	D	C
60	**60**	**67**	**67**	**69**	**69**	**67**	**65**	**65**	**64**	**64**	**62**	**62**	**60**

G	G	F	F	E	E	D	G	G	F	F	E	E	D
67	**67**	**65**	**65**	**64**	**64**	**62**	**67**	**67**	**65**	**65**	**64**	**64**	**62**

C	C	G	G	A	A	G	F	F	E	E	D	D	C
60	**60**	**67**	**67**	**69**	**69**	**67**	**65**	**65**	**64**	**64**	**62**	**62**	**60**

Twinkle

We will use MIDI notes

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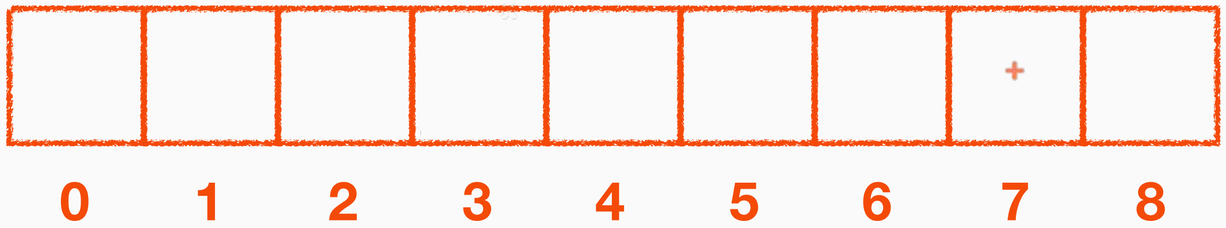
Arrays

- Structures for save one data type information
- Has N positions



Array with N = 9

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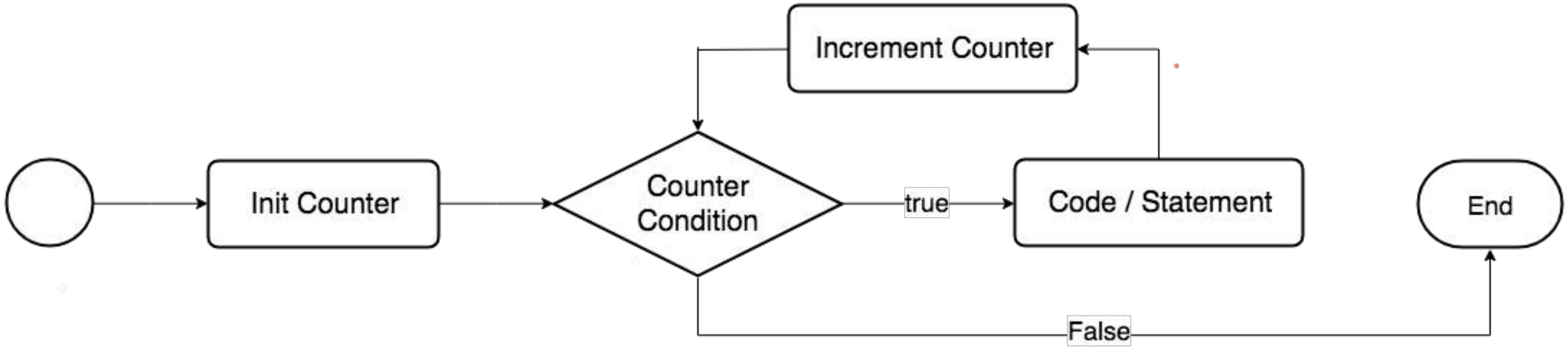
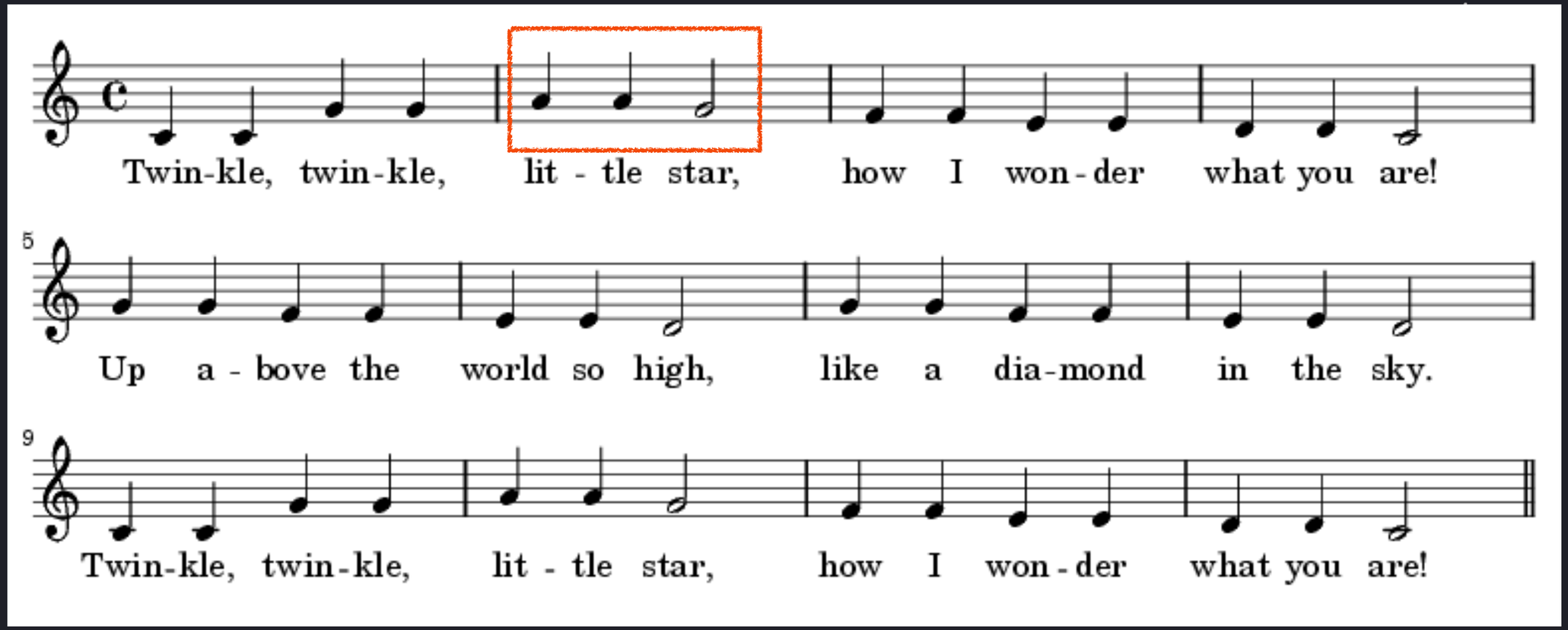
for loop


Increment Counter
Init Counter
Counter Condition
true
Code / Statement
End
False



What happend with the duration of notes, how handle it?

Twinkle

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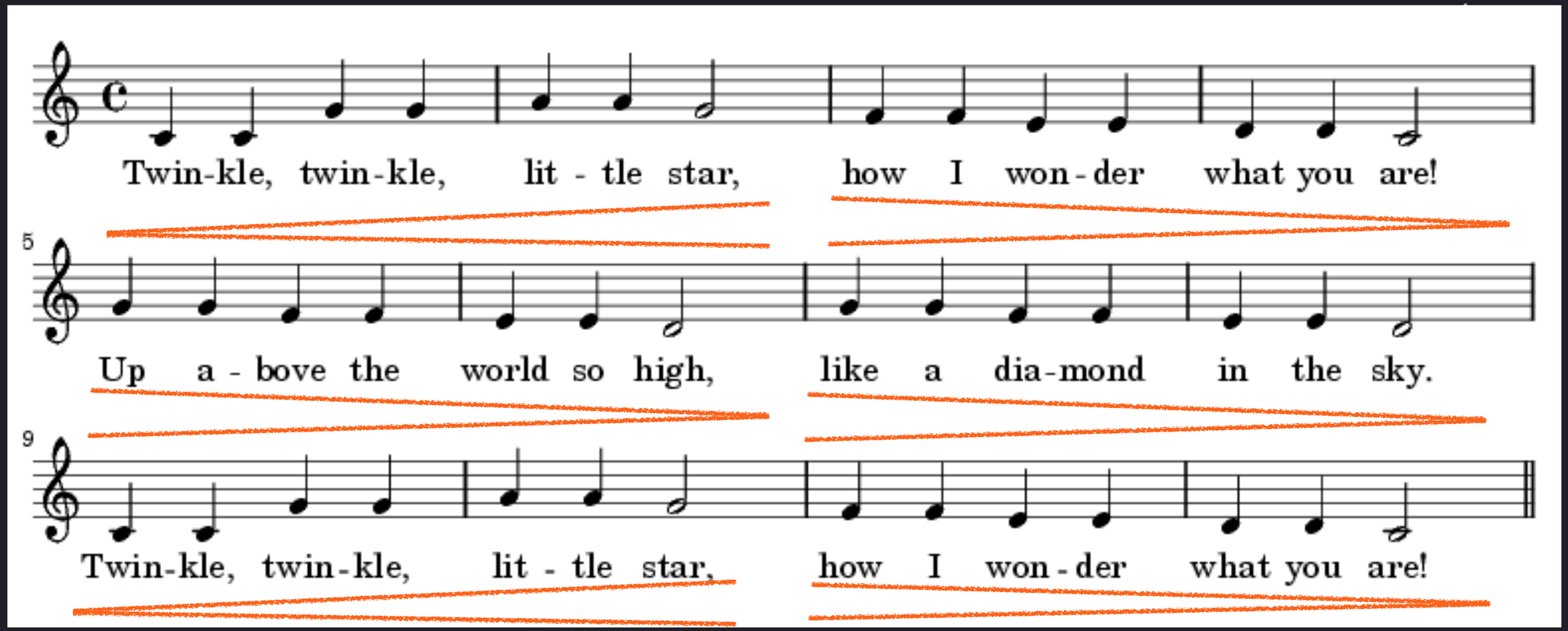

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How we can handle dynamics?

Play some notes louder than others