

Processing Sound

Class Structure

I. Abstract Interface

Interface	Type	Methods	Arguments
SoundObject	void	new	()

II. Audio Device (optional)

Class Name	Type	Methods	Arguments
AudioDevice	void	new	SampleRate (int) BufferSize (int)
	int	sampleRate	()

III. SoundFile Support

Class Name	Type	Methods	Arguments
SoundFile	void	new	Path (str)
	void	play	Rate (float) Cue (int) Amplitude (float) Add (float) Pan (float)
	void	loop	Rate (float) Cue (int) Amplitude (float) Add (float) Pan (float)
	void	jump	Time (float)
	void	stop	()
	int	frames	()
	int	samplerate	()
	int	channels	()
	float	duration	()
	void	set	Rate (float) Cue (int) Amplitude (float) Add (mul)

	void	rate	Rate(float)
	void	cue	Seconds (float)
	void	amp	Amplitude(float)
	void	add	Add (float)

IV. Oscillator Interface

Interface Name	Type	Methods	Arguments
Oscillator			
	void	play	Frequency (float) Amplitude (float) Add (float) Pan (float)
	void	set	Frequency (float) Amplitude (float) Add (float) Pan (float)
	void	freq	Frequency (float)
	void	amp	Amplitude (float)
	void	add	Add (float)
	void	pan	Pan (float)
	void	stop	()

IV.1 Inheriting Classes (Oscillator)

Class Name	Type	Methods	Arguments
SinOsc	void	new	()

Class Name	Type	Methods	Arguments
SqrOsc	void	new	()

Class Name	Type	Methods	Arguments
SawOsc	void	new	()

Class Name	Type	Methods	Arguments
Pulse	void	new	()
	void	play	Frequency (float) Width (Float) Amplitude (float) Add (float) Pan (float)
	void	width	Width(float)

V Noise Interface

Interface Name	Type	Methods	Arguments
Noise			
	void	play	Amplitude (float) Type (string)
	void	set	Amplitude (float) Add (float) Pan (float)
	void	amp	Amplitude (float)
	void	add	Add (float)
	void	pan	Pan (float)

V.2 Inheriting Classes (Noise)

Class Name	Type	Methods	Arguments
WhiteNoise	void	new	()

Class Name	Type	Methods	Arguments
PinkNoise	void	new	()

Class Name	Type	Methods	Arguments
BrownNoise	void	new	()

VI Envelopes

Class Name	Type	Methods	Arguments
Envelope	void	new	()
	void	play	Attack (float) Decay (float) Sustain (float) Release(float)

VI I/O Objects

Class Name	Type	Methods	Arguments
AudioIn	void	new	()
	void	play	Channel (int) Amplitude (float)

VII Descriptors

Class	Type	Methods	Arguments
FFT	void	new	()
	void	analyze	Bands (float array)
	void	input	Input (SndObject) FFT_bins (int)

Class	Type	Methods	Arguments
Amplitude	void	new	()
	float	analyze	()
	void	input	Input (SndObject)

VIII. Effects

Class Name	Type	Methods	Arguments
Reverb	void	new	()
	void	process	Input (SndObject) RoomSize (float) Damp (float) Wet (float)
	void	set	RoomSize (float) Damp (float) Wet (float)
	void	roomSize	RoomSize (float)
	void	damp	Damp (float)
	void	wet	Wet (float)

Class Name	Type	Methods	Arguments
Delay	void	new	
	void	process	Input (SndObject) MaxDelTime (float) DelayTime (float) FeedBack (float)
	void	set	DelayTime (float) FeedBack (float)
	void	time	Time (float)
	void	feedback	Feedback (float)

Class Name	Type	Methods	Arguments
LowPass	void	new	
	void	process	Input (SndObject) Freq (float) Res (float)
	void	set	Freq (float) Res (float)
	void	freq	Freq (float)
	void	res	Res (float)

Class Name	Type	Methods	Arguments
HighPass	void	new	
	void	process	Input (SndObject) Freq (float) Res (float)
	void	set	Freq (float) Res (float)

	void	freq	Freq (float)
	void	res	Res (float)

Class Name	Type	Methods	Arguments
BandPass	void	new	
	void	process	Input (SndObject) Freq (float) Res (float)
	void	set	Freq (float) Res (float)
	void	freq	Freq (float)
	void	res	Res (float)

GSoC (v.1.0)

New general Features:

1. Windows + Linux Versions of the Library
2. MP3 support
3. Rewrite the Envelope Function to generate ADSR
4. **Bugfixing v.01**

New Classes + extensions:

IV. Oscillator Super Class

Class Name	Type	Methods	Arguments
Oscillator			
	void	set etc.	Input (SoundObject)

VII Descriptors

Class	Type	Methods	Arguments
PitchTracker	void	new	()
	float	process	Input (SndObject)

IX. Utility

Class Name	Type	Methods	Arguments
Mix	void	new	
	void	play	Input (SoundObject[])
	void	amp	Volumes (float[])