Button

☑ Check Box

○ Radio Button 0

⦿ Radio Button 1

○ Radio Button 2

○ Radio Button 3

○ Radio Button 4

text box

https://angelinepho.github.io/

Button Widget				
Current Widget State	Current Clicked State	Transition	Present Widget State	Present Clicked State
Idle		Mouse Over	Hover	
Hover		Mouse Out	Idle	
Hover		Mouse Down	Pressed	
Hover		Mouse Up	Up	[object MouseEvent]
Pressed		Mouse Up	Up	[object MouseEvent]
Pressed	[object MouseEvent]	Mouse Up	Up	[object MouseEvent]
Pressed		Mouse Out	Idle	
Up	[object MouseEvent]	Mouse Out	Idle	

Check Box				
Current Widget State	Current Check State	Transition	Present Widget State	Present Check State
Idle	Unchecked	Mouse Over	Hover	Unchecked
Idle	Checked	Mouse Over	Hover	Checked
Hover	Unchecked	Mouse Out	Idle	Unchecked
Hover	Checked	Mouse Out	Idle	Checked
Hover	Unchecked	Mouse Down	Pressed	Unchecked
Hover	Checked	Mouse Down	Pressed	Checked
Hover	Unchecked	Mouse Up	Up	Checked
Hover	Checked	Mouse Up	Up	Unchecked
Pressed	Unchecked	Mouse Up	Up	Checked
Pressed	Checked	Mouse Up	Up	Unchecked

Pressed	Unchecked	Mouse Out	Idle	Unchecked
Pressed	Checked	Mouse Out	Idle	Checked
Up	Unchecked	Mouse Out	Idle	Checked
Up	Checked	Mouse Out	Idle	Unchecked

Radio Buttons
(Note: n starts at 0 and represents a single radio button in the order that it was added)

Current Widget State	Current Check State	Transition	Present Widget State	Present Check State
Idle(n)	null	Mouse Over	Hover(n)	null
Idle(n)	n	Mouse Over	Hover(n)	n
Hover(n)	null	Mouse Out	Idle(n)	null
Hover(n)	n	Mouse Out	Idle(n)	n
Hover(n)	null	Mouse Down	Pressed(n)	null
Hover(n)	n	Mouse Down	Pressed(n)	n
Hover(n)	null	Mouse Up	Up(n)	n
Hover(n)	n	Mouse Up	Up(n)	null
Pressed(n)	null	Mouse Up	Up(n)	n
Pressed(n)	n	Mouse Up	Up(n)	null
Pressed(n)	null	Mouse Out	Idle(n)	null
Pressed(n)	n	Mouse Out	Idle(n)	n
Up(n)	null	Mouse Out	Idle(n)	n
Up(n)	n	Mouse Out	Idle(n)	null

Text Box
(Note: Backspace is handled)

Current Widget State	Transition	Present Widget State
Idle	Mouse Over	Hover

Hover	Mouse Out	Idle
Hover	Mouse Down	Pressed
Hover	Mouse Up	Up
Pressed	Mouse Up	Up
Pressed	Mouse Out	Idle
Up	Mouse Out	Idle
Current Text	Text Transition	Present Text
text.text()	Key Up	text.text() + event.key

Scroll Bar (Note: event.y() column is pseudo code)				
Current Widget State	Transition	event.y()	Present Widget State	Scroll Direction
Idle	Mouse Over		Hover	
Hover	Mouse Out		Idle	
Hover	Mouse Down	event.y() <= scrollbar.y()	Pressed	Up Movement
Hover	Mouse Down	event.y() >= scrollbar.y() + scrollbar.height()	Pressed	Down Movement
Hover	Mouse Down	event.y() > scrollthumb.y()	Pressed	Down Movement
Hover	Mouse Down	event.y() < scrollthumb.y()	Pressed	Up Movement
Hover	Mouse Up	event.y() <= scrollbar.y()	Up	Up Movement
Hover	Mouse Up	event.y() >= scrollbar.y() + scrollbar.height()	Up	Down Movement
Hover	Mouse Up	event.y() > scrollthumb.y()	Up	Down Movement
Hover	Mouse Up	event.y() <	Up	Up Movement

		scrollthumb.y()		
Pressed	Mouse Up	event.y() <= scrollbar.y()	Up	Up Movement
Pressed	Mouse Up	event.y() >= scrollbar.y() + scrollbar.height()	Up	Down Movement
Pressed	Mouse Up	event.y() > scrollthumb.y()	Up	Down Movement
Pressed	Mouse Up	event.y() < scrollthumb.y()	Up	Up Movement
Pressed	Mouse Out		Idle	
Up	Mouse Out		Idle	

Progress Bar
(Note: The second section below is pseudocode. increment is an integer from 0 to 100 that represents the progress. Increment(v) is a method that increments the progress value)

Current Widget State	Transition	Present Widget State
Idle	Mouse Over	Hover
Hover	Mouse Out	Idle
Hover	Mouse Down	Pressed
Hover	Mouse Up	Up
Pressed	Mouse Up	Up
Pressed	Mouse Out	Idle
Up	Mouse Out	Idle
Current Increment	Increment Transition	Present Increment
(increment)%	Increment(v)	increment = v (increment)%

Toggle Button

Current Widget State	Current Toggle State	Transition	Present Widget State	Present Toggle State

Idle	Off	Mouse Over	Hover	Off
Idle	On	Mouse Over	Hover	On
Hover	Off	Mouse Out	Idle	Off
Hover	On	Mouse Out	Idle	On
Hover	Off	Mouse Down	Pressed	Off
Hover	On	Mouse Down	Pressed	On
Hover	Off	Mouse Up	Up	On
Hover	On	Mouse Up	Up	Off
Pressed	Off	Mouse Up	Up	On
Pressed	On	Mouse Up	Up	Off
Pressed	Off	Mouse Out	Idle	Off
Pressed	On	Mouse Out	Idle	On
Up	Off	Mouse Out	Idle	On
Up	On	Mouse Out	Idle	Off