Love2d.js

The javascript love2d framework

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1) Introduce

Description

love2d api for html5 game,not using emscripten,made with equivalent of lua functions written in javascript

Difference between love2d and love2d.js

- This framework work with javascript, not lua.
- love.graphics.setFont(name) work with name of font ("arial", "ani", "consola"). It can't load ttf file in this time.
- love.window.setMode() can't set fullscreen.
- love.graphics.print(text,x,y,r,sx) sx can set only font size
- · some limitation due at your browsers can do and can't do

Features

- draw: text, rectangle, cercle, line
- load image, song ,video and use it
- · input: keyboard, mouse and touch
- · setting window and icon

!! At start of love2d.js, there is it !!

```
const LOVE2D_MOUSE=true;
const LOVE2D_KEYBOARD=true;
const LOVE2D_TOUCH=true;
const LOVE2D_GAMEPAD=true;
```

true mean it load event at start, false not. So don't forget to change it.

2) API

love variable is inialised in love2d.js, it make with Love class. it's object with all you need for use this framework.

2-1) Main function

love.load

* Initialize

```
love.load = function()
{
... code
}
```

* What is do

when it is initialize, this function is call before all, once tine. Perfect for load asset.

love.update

* Initialize

```
love.update = function(dt)
{
... code
}
```

* Parameter

dt : delta time (time between two frame)

* What is do

update loop function

love.draw

* Initialize

```
love.draw = function()
{
... code
}
```

* What is do

draw loop function

love.keypressed

* Initialize

```
love.keypressed = function( key, code, repeat)
{
... code
}
```

* Parameter

- key: string key ("a","z","ArrowUp","Escape")
- code : ascii key code
- repeat : true if key is repeat, false if not

* What is do

this function is call when keyboard key is press

love.keyreleased

* Initialize

```
love.keyreleased = function(key,code)
{
... code
}
```

* Parameter

- key: string key ("a","z","ArrowUp","Escape")
- code : ascii key code

* What is do

this is call when key is release

2-2) Graphics

love.graphics_setColor

* Calling

```
love.graphics_setColor(r,g,b,a);
love.graphics_setColor(r,g,b);
```

* Parameter

- r : red color (0 -> 255)
- b : blue color (0 -> 255)
- g : green color (0 -> 255)
- a : alpha color (0 -> 255)

* What is do

set color for all drawing after

love.graphics_setAlpha

* Calling

love.graphics_setAlpha(a);

* Parameter

a: alpha color $(0 \rightarrow 255)$

* What is do

set alpha for all draw after

love.graphics_getColor

* Call

```
let col = love.graphics_getColor();
```

* return

code of currant color in hexadecimal

love.graphics_setFont

* Call

love.graphics_setFont(font);

* Parameter

• font : string name of font, not a path

love.graphics_setMode

* Call

love.graphics_setMode(w,h);

* Parameter

w: width of canvas

h: height of canvas

love.graphics_print

* Call

love.graphics_print(text,x,y,r,sx);

* Parameter

• text : string text

• x : x position

• y:y position

• r : rotate in radiant

• sx : size of text

love.graphics_rectangle

* Call

love.graphics_rectangle(mode, x, y, w, h);

* parameter

• mode : "fill" or "line" style of rectangle

• x : x position

• y:y position

• w: width

• h: height

love.graphics_circle

* Call

love.graphics_circle(mode, x, y, radius);

* Parameter

• mode: "fill" or "line" draw mode

• x : x position of center

• y : y position of center

• radius : radius of circle

love.graphics_line

* Call

love.graphics_line(x,y,x2,y2);

* Parameter

• x : x position start

• y: y position start

• x2 : x position of end

• y2 : y position of end

love.graphics_newImage

* Call

let img = love.graphics_newImage(filename);

* Parameter

• filename : string path of image. be aware it's can't verify path of file.

* Return

return at Image object.

Image object can draw with love.graphics_draw()

love.graphics_newVideo

* Call

let vid = love.graphics_newVideo(filename);

* Parameter

• filename: string path of file. be aware it can't verify path's file, use webm file.

* Return

```
return video object. can draw with <u>love.graphics_draw()</u>. object.play() -> play video. object.pause() -> stop video.
```

love.graphics_newQuad

* Call

```
let q = love.graphics_newQuad(x, y, w, h);
```

* Parameter

• x : position x of quad on image

• y : position y of quad on image

w: widthh: height

* Return

quad object

* What is do

object quad can use with love.graphics_draw() for draw part of image (titlesheet)

love.graphics_draw

* Call

```
love.graphics_draw(object ,x ,y ,r);
love.graphics_draw(object ,x ,y ,r ,sx ,sy);
love.graphics_draw(object ,quad ,x ,y ,r ,sx ,sy);
```

* Parameter

- object : Image or Video object
- quad : quad object create by love.graphics newQuad
- x : x position
- y:y position
- r : rotate in radiant (0 if not rotate)
- sx : width size on screen
- sy: height size on screen

* What is do

draw image object at screen or part of image object (quad)

love.graphics_scale

* Call

love.graphics_scale(sw, sh);

* Parameter

- sw : Scales the width of the current drawing (1=100%, 0.5=50%, 2=200%, etc.)
- sh: Scales the height of the current drawing (1=100%, 0.5=50%, 2=200%, etc.)

2-3) Audio

love.audio newSource

* Call

let song = love.audio_newSource(filename, type);

* Parameter

- filename : string file path. be aware it can't verify path of file. file is (mp3 ogg wav)
- type: "static" or "streaming", once play or loop play

* Return

return at Song object,
play with love.audio_play(object)
pause with love.audio_pause(object)
set volume with love.audio_setVolume(object)
get volume with love.audio_getVolume(object)

love.audio_play

* Call

love.audio_play(object);

* Parameter

• object : Song object

* What is do

play sound or music

love.audio_pause

* Call

love.audio_pause(object);

* Parameter

• object : Song object

* What is do

pause Song object source

love.audio_stop

* Call

love.audio_stop(object);

* Parameter

• object : Song object

* What is do

stop Song object source

love.audio_setVolume

* Call

love.audio_setVolume(volume);

* Parameter

• volume : 0.0 (minimum) - > 1.0 (maximum)

* What is do

set volume of all song play after

love.audio_getVolume

* Call

let v = love.audio_getVolume();

* Return

number of currant volume

2-4) Keyboard

love.keyboard_isDown

* Call

```
if(love.keyboard_isDown(key)){...}
```

* Parameter

• key: string of key

* Return

true if down, false if not

* What is do

testing if key is down

2-5) Mouse

love.mouse_getX

* Call

```
let mx = love.mouse_getX();
```

* Return

mouse x position

love.mouse_getY

* Call

```
let my = love.mouse_getY();
```

* Return

mouse y position

love.mouse_isDown

* Call

if(love.mouse_isDown(id)) {...}

* Parameter

Id: 1 = left btn, 2 = right btn, 3 = middle btn

2-6) Touch

love.touch_getPosition

not working on all touch screen, use mouse input

* Call

let t = love.touch_getPosition(id);

* Parameter

id: number >= 0, id of touche

* Return

 $t: \{x,y\} \rightarrow \text{pos of touch}$

love.touch_getTouches

not working on all touch screen, use mouse input

* Call

let t = love.touch_getTouches();

* Return

t: array, list of id touch

2-7) Window

love.window_getWidth

* Call

```
let w = love.window_getWidth();
```

* Return

Return number of canvas width

love.window_getHeight

* Call

```
let h = love.window_getHeight();
```

* Return

Return number of canvas height

love.window_setIcon

* Call

love.window_setIcon(object);

* Parameter

• object : Image object create with love.graphics_newImage()

love.window setTitle

* Call

love.window_setTitle(name);

* Parameter

name = string title name

love.window_getTitle

* Call

let title = love.window_getTitle();

2-8) System

love.system_writeSave

* Call

love.system_writeSave(name,val); // save val in to local browser stockage

* Parameter

name = string key

val = object need to save

love.system_readSave

* Call

let obj = love.system_readSave(name);

* Parameter

name = string key

* Return

object saved

love.system_getOs

* Call

let os = love.system_getOs();

* Return

« Windows », « OS X », « IOS », « UNIX », « Android », « Chrome OS »

love.system_openURL

* Call

love.system_openURL(url);

* Parameter

url = string url of page to open

2-9) Event

love.event_quit

* Call

```
love.event_quit();
```

* What is do

break main loop and draw black screen "game is stopped"

2-10) Timer

love.timer_getDelta

* Call

```
let dt = love.timer_getDelta();
```

* Return

dt: time between two frame

2-11) Math

math_random

* Call

```
let rdm1 = math_random(min, max); // min → max
let rdm2 = math_random(max); // 0 → max
```

* Parameter

min : minimum numbermax : maximum number

2-12) Gamepad

let joysticks = love.joystick_getJoysticks(); // get array of object : joystick class
let joystick_count = love.joystick_getJoystickCount(); // get number of connected joystick

Joystick class = gamepad

- Joystick.getButtonCount() -> number // get number of button
- Joystick.getAxisCount() -> number // get number of axis
- Joystick.getId() -> number
- Joystick.getName() -> string
- Joystick.isDown(id:number) -> bool // return true if button id is down else false
- Joystick.getAxis(id:number) -> number -1.0 -> 1.0

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