BrowserWindow

Create and control browser windows.

Process: Main

```
// In the main process.
  const {BrowserWindow} = require('electron')

  // Or use `remote` from the renderer process.
  // const {BrowserWindow} = require('electron').remote

  let win = new BrowserWindow({width: 800, height: 600})
  win.on('closed', () => {
    win = null
  })

  // Load a remote URL
  win.loadURL('https://github.com')

  // Or load a local HTML file
  win.loadURL(`file://${__dirname}/app/index.html`)
```

Frameless window

To create a window without chrome, or a transparent window in arbitrary shape, you can use the Frameless Window API.

Showing window gracefully

When loading a page in the window directly, users may see the page load incrementally, which is not a good experience for a native app. To make the window display without visual flash, there are two solutions for different situations.

Using `ready-to-show` event

While loading the page, the `ready-to-show` event will be emitted when the renderer process has rendered the page for the first time if the window has not been shown yet. Showing the window after this event will have no visual flash:

```
const {BrowserWindow} = require('electron')
  let win = new BrowserWindow({show: false})
  win.once('ready-to-show', () => {
    win.show()
  })
```

This event is usually emitted after the `did-finish-load` event, but for pages with many remote resources, it may be emitted before the `did-finish-load` event.

Setting `backgroundColor`

For a complex app, the `ready-to-show` event could be emitted too late, making the app feel slow. In this case, it is recommended to show the window immediately, and use a `backgroundColor` close to your app's background:

```
const {BrowserWindow} = require('electron')

  let win = new BrowserWindow({backgroundColor: '#2e2c29'})
  win.loadURL('https://github.com')
```

Note that even for apps that use `ready-to-show` event, it is still recommended to set `backgroundColor` to make app feel more native.

Parent and child windows

By using `parent` option, you can create child windows:

```
const {BrowserWindow} = require('electron')

  let top = new BrowserWindow()
  let child = new BrowserWindow({parent: top})
  child.show()
  top.show()
```

The `child` window will always show on top of the `top` window.

Modal windows

A modal window is a child window that disables parent window, to create a modal window, you have to set both `parent` and `modal` options:

```
const {BrowserWindow} = require('electron')

  let child = new BrowserWindow({parent: top, modal: true, show: false})
  child.loadURL('https://github.com')
  child.once('ready-to-show', () => {
    child.show()
  })
```

Page visibility

The Page Visibility API works as follows:

- On all platforms, the visibility state tracks whether the window is hidden/minimized or not.
- Additionally, on macOS, the visibility state also tracks the window occlusion state. If the window is occluded (i.e. fully covered) by another window, the visibility state will be `hidden`. On other platforms, the visibility state will be `hidden` only when the window is minimized or explicitly hidden with `win.hide()`.
- If a `BrowserWindow` is created with `show: false`, the initial visibility state will be `visible` despite the window actually being hidden.
- If `backgroundThrottling` is disabled, the visibility state will remain `visible` even if the window is minimized, occluded, or hidden.

It is recommended that you pause expensive operations when the visibility state is `hidden` in order to minimize power consumption.

Platform notices

- On macOS modal windows will be displayed as sheets attached to the parent window.
- On macOS the child windows will keep the relative position to parent window when parent window moves, while on Windows and Linux child windows will not move.
- On Windows it is not supported to change parent window dynamically.
- On Linux the type of modal windows will be changed to `dialog`.
- On Linux many desktop environments do not support hiding a modal window.

Class: BrowserWindow

Create and control browser windows.

Process: Main

`BrowserWindow` is an EventEmitter.

It creates a new `BrowserWindow` with native properties as set by the `options`.

`new BrowserWindow([options])`

- `options` Object (optional)
  - `width` Integer (optional) - Window's width in pixels. Default is `800`.
  - `height` Integer (optional) - Window's height in pixels. Default is `600`.
  - `x` Integer (optional) (**required** if y is used) - Window's left offset from screen. Default is to center the window.
  - `y` Integer (optional) (**required** if x is used) - Window's top offset from screen. Default is to center the window.
  - `useContentSize` Boolean (optional) - The `width` and `height` would be used as web page's size, which means the actual window's size will include window frame's size and be slightly larger. Default is `false`.
  - `center` Boolean (optional) - Show window in the center of the screen.
  - `minWidth` Integer (optional) - Window's minimum width. Default is `0`.
  - `minHeight` Integer (optional) - Window's minimum height. Default is `0`.
  - `maxWidth` Integer (optional) - Window's maximum width. Default is no limit.
  - `maxHeight` Integer (optional) - Window's maximum height. Default is no limit.
  - `resizable` Boolean (optional) - Whether window is resizable. Default is `true`.
  - `movable` Boolean (optional) - Whether window is movable. This is not implemented on Linux. Default is `true`.
  - `minimizable` Boolean (optional) - Whether window is minimizable. This is not implemented on Linux. Default is `true`.
  - `maximizable` Boolean (optional) - Whether window is maximizable. This is not implemented on Linux. Default is `true`.
  - `closable` Boolean (optional) - Whether window is closable. This is not implemented on Linux. Default is `true`.

- `focusable` Boolean (optional) - Whether the window can be focused. Default is `true`. On Windows setting `focusable: false` also implies setting `skipTaskbar: true`. On Linux setting `focusable: false` makes the window stop interacting with wm, so the window will always stay on top in all workspaces.
- `alwaysOnTop` Boolean (optional) - Whether the window should always stay on top of other windows. Default is `false`.
- `fullscreen` Boolean (optional) - Whether the window should show in fullscreen. When explicitly set to `false` the fullscreen button will be hidden or disabled on macOS. Default is `false`.
- `fullscreenable` Boolean (optional) - Whether the window can be put into fullscreen mode. On macOS, also whether the maximize/zoom button should toggle full screen mode or maximize window. Default is `true`.
- `simpleFullscreen` Boolean (optional) - Use pre-Lion fullscreen on macOS. Default is `false`.
- `skipTaskbar` Boolean (optional) - Whether to show the window in taskbar. Default is `false`.
- `kiosk` Boolean (optional) - The kiosk mode. Default is `false`.
- `title` String (optional) - Default window title. Default is `"Electron"`.
- `icon` (NativeImage | String) (optional) - The window icon. On Windows it is recommended to use `ICO` icons to get best visual effects, you can also leave it undefined so the executable's icon will be used.
- `show` Boolean (optional) - Whether window should be shown when created. Default is `true`.
- `frame` Boolean (optional) - Specify `false` to create a Frameless Window. Default is `true`.
- `parent` BrowserWindow (optional) - Specify parent window. Default is `null`.
- `modal` Boolean (optional) - Whether this is a modal window. This only works when the window is a child window. Default is `false`.
- `acceptFirstMouse` Boolean (optional) - Whether the web view accepts a single mouse-down event that simultaneously activates the window. Default is `false`.
- `disableAutoHideCursor` Boolean (optional) - Whether to hide cursor when typing. Default is `false`.
- `autoHideMenuBar` Boolean (optional) - Auto hide the menu bar unless the `Alt` key is pressed. Default is `false`.
- `enableLargerThanScreen` Boolean (optional) - Enable the window to be resized larger than screen. Default is `false`.
- `backgroundColor` String (optional) - Window's background color as a hexadecimal value, like `#66CD00` or `#FFF` or `#80FFFFFF` (alpha is supported). Default is `#FFF` (white).
- `hasShadow` Boolean (optional) - Whether window should have a shadow. This is only implemented on macOS. Default is `true`.
- `opacity` Number (optional) - Set the initial opacity of the window, between 0.0 (fully transparent) and 1.0 (fully opaque). This is only implemented on Windows and macOS.
- `darkTheme` Boolean (optional) - Forces using dark theme for the window, only works on some GTK+3 desktop environments. Default is `false`.
- `transparent` Boolean (optional) - Makes the window transparent. Default is `false`.
- `type` String (optional) - The type of window, default is normal window. See more about this below.
- `titleBarStyle` String (optional) - The style of window title bar. Default is `default`. Possible values are:
  - `default` - Results in the standard gray opaque Mac title bar.
  - `hidden` - Results in a hidden title bar and a full size content window, yet the title bar still has the standard window controls ("traffic lights") in the top left.
  - `hiddenInset` - Results in a hidden title bar with an alternative look where the traffic light buttons are slightly more inset from the window edge.
  - `customButtonsOnHover` Boolean (optional) - Draw custom close, minimize, and full screen buttons on macOS frameless windows. These buttons will not display unless hovered over in the top left of the window. These

custom buttons prevent issues with mouse events that occur with the standard window toolbar buttons. **Note:** This option is currently experimental.

- `fullscreenWindowTitle` Boolean (optional) - Shows the title in the title bar in full screen mode on macOS for all `titleBarStyle` options. Default is `false`.
- `thickFrame` Boolean (optional) - Use `WS_THICKFRAME` style for frameless windows on Windows, which adds standard window frame. Setting it to `false` will remove window shadow and window animations. Default is `true`.
- `vibrancy` String (optional) - Add a type of vibrancy effect to the window, only on macOS. Can be `appearance-based`, `light`, `dark`, `titlebar`, `selection`, `menu`, `popover`, `sidebar`, `medium-light` or `ultra-dark`. Please note that using `frame: false` in combination with a vibrancy value requires that you use a non-default `titleBarStyle` as well.
- `zoomToPageWidth` Boolean (optional) - Controls the behavior on macOS when option-clicking the green stoplight button on the toolbar or by clicking the Window > Zoom menu item. If `true`, the window will grow to the preferred width of the web page when zoomed, `false` will cause it to zoom to the width of the screen. This will also affect the behavior when calling `maximize()` directly. Default is `false`.
- `tabbingIdentifier` String (optional) - Tab group name, allows opening the window as a native tab on macOS 10.12+. Windows with the same tabbing identifier will be grouped together. This also adds a native new tab button to your window's tab bar and allows your `app` and window to receive the `new-window-for-tab` event.
- `webPreferences` Object (optional) - Settings of web page's features.
  - `devTools` Boolean (optional) - Whether to enable DevTools. If it is set to `false`, can not use `BrowserWindow.webContents.openDevTools()` to open DevTools. Default is `true`.
  - `nodeIntegration` Boolean (optional) - Whether node integration is enabled. Default is `true`.
  - `nodeIntegrationInWorker` Boolean (optional) - Whether node integration is enabled in web workers. Default is `false`. More about this can be found in Multithreading.
  - `preload` String (optional) - Specifies a script that will be loaded before other scripts run in the page. This script will always have access to node APIs no matter whether node integration is turned on or off. The value should be the absolute file path to the script. When node integration is turned off, the preload script can reintroduce Node global symbols back to the global scope. See example here.
  - `sandbox` Boolean (optional) - If set, this will sandbox the renderer associated with the window, making it compatible with the Chromium OS-level sandbox and disabling the Node.js engine. This is not the same as the `nodeIntegration` option and the APIs available to the preload script are more limited. Read more about the option here. **Note:** This option is currently experimental and may change or be removed in future Electron releases.
  - `session` Session (optional) - Sets the session used by the page. Instead of passing the Session object directly, you can also choose to use the `partition` option instead, which accepts a partition string. When both `session` and `partition` are provided, `session` will be preferred. Default is the default session.
  - `partition` String (optional) - Sets the session used by the page according to the session's partition string. If `partition` starts with `persist:`, the page will use a persistent session available to all pages in the app with the same `partition`. If there is no `persist:` prefix, the page will use an in-memory session. By assigning the same `partition`, multiple pages can share the same session. Default is the default session.
  - `affinity` String (optional) - When specified, web pages with the same `affinity` will run in the same renderer process. Note that due to reusing the renderer process, certain `webPreferences` options will also be shared between the web pages even when you specified different values for them, including but not limited to `preload`, `sandbox` and `nodeIntegration`. So it is suggested to use exact same `webPreferences` for web pages with the same `affinity`.
  - `zoomFactor` Number (optional) - The default zoom factor of the page, `3.0` represents `300%`. Default is `1.0`.
  - `javascript` Boolean (optional) - Enables JavaScript support. Default is `true`.

- `webSecurity` Boolean (optional) - When `false`, it will disable the same-origin policy (usually using testing websites by people), and set `allowRunningInsecureContent` to `true` if this options has not been set by user. Default is `true`.
- `allowRunningInsecureContent` Boolean (optional) - Allow an https page to run JavaScript, CSS or plugins from http URLs. Default is `false`.
- `images` Boolean (optional) - Enables image support. Default is `true`.
- `textAreasAreResizable` Boolean (optional) - Make TextArea elements resizable. Default is `true`.
- `webgl` Boolean (optional) - Enables WebGL support. Default is `true`.
- `webaudio` Boolean (optional) - Enables WebAudio support. Default is `true`.
- `plugins` Boolean (optional) - Whether plugins should be enabled. Default is `false`.
- `experimentalFeatures` Boolean (optional) - Enables Chromium's experimental features. Default is `false`.
- `experimentalCanvasFeatures` Boolean (optional) - Enables Chromium's experimental canvas features. Default is `false`.
- `scrollBounce` Boolean (optional) - Enables scroll bounce (rubber banding) effect on macOS. Default is `false`.
- `blinkFeatures` String (optional) - A list of feature strings separated by `,`, like `CSSVariables,KeyboardEventKey` to enable. The full list of supported feature strings can be found in the RuntimeEnabledFeatures.json5 file.
- `disableBlinkFeatures` String (optional) - A list of feature strings separated by `,`, like `CSSVariables,KeyboardEventKey` to disable. The full list of supported feature strings can be found in the RuntimeEnabledFeatures.json5 file.
- `defaultFontFamily` Object (optional) - Sets the default font for the font-family.
  - `standard` String (optional) - Defaults to `Times New Roman`.
  - `serif` String (optional) - Defaults to `Times New Roman`.
  - `sansSerif` String (optional) - Defaults to `Arial`.
  - `monospace` String (optional) - Defaults to `Courier New`.
  - `cursive` String (optional) - Defaults to `Script`.
  - `fantasy` String (optional) - Defaults to `Impact`.
- `defaultFontSize` Integer (optional) - Defaults to `16`.
- `defaultMonospaceFontSize` Integer (optional) - Defaults to `13`.
- `minimumFontSize` Integer (optional) - Defaults to `0`.
- `defaultEncoding` String (optional) - Defaults to `ISO-8859-1`.
- `backgroundThrottling` Boolean (optional) - Whether to throttle animations and timers when the page becomes background. This also affects the Page Visibility API. Defaults to `true`.
- `offscreen` Boolean (optional) - Whether to enable offscreen rendering for the browser window. Defaults to `false`. See the offscreen rendering tutorial for more details.
- `contextIsolation` Boolean (optional) - Whether to run Electron APIs and the specified `preload` script in a separate JavaScript context. Defaults to `false`. The context that the `preload` script runs in will still have full access to the `document` and `window` globals but it will use its own set of JavaScript builtins (`Array`, `Object`, `JSON`, etc.) and will be isolated from any changes made to the global environment by the loaded page. The Electron API will only be available in the `preload` script and not the loaded page. This option should be used when loading potentially untrusted remote content to ensure the loaded content cannot tamper with the `preload` script and any Electron APIs being used. This option uses the same technique used by Chrome Content Scripts. You can access this context in the dev tools by selecting the 'Electron Isolated Context' entry in

the combo box at the top of the Console tab. **Note:** This option is currently experimental and may change or be removed in future Electron releases.
    - `nativeWindowOpen` Boolean (optional) - Whether to use native `window.open()`. Defaults to `false`. **Note:** This option is currently experimental.
    - `webviewTag` Boolean (optional) - Whether to enable the `<webview>` tag. Defaults to the value of the `nodeIntegration` option. **Note:** The `preload` script configured for the `<webview>` will have node integration enabled when it is executed so you should ensure remote/untrusted content is not able to create a `<webview>` tag with a possibly malicious `preload` script. You can use the `will-attach-webview` event on webContents to strip away the `preload` script and to validate or alter the `<webview>`'s initial settings.
    - `additionArguments` String - A list of strings that will be appended to `process.argv` in the renderer process of this app. Useful for passing small bits of data down to renderer process preload scripts.

When setting minimum or maximum window size with `minWidth` / `maxWidth` / `minHeight` / `maxHeight`, it only constrains the users. It won't prevent you from passing a size that does not follow size constraints to `setBounds` / `setSize` or to the constructor of `BrowserWindow`.

The possible values and behaviors of the `type` option are platform dependent. Possible values are:

- On Linux, possible types are `desktop`, `dock`, `toolbar`, `splash`, `notification`.
- On macOS, possible types are `desktop`, `textured`.
    - The `textured` type adds metal gradient appearance (`NSTexturedBackgroundWindowMask`).
    - The `desktop` type places the window at the desktop background window level (`kCGDesktopWindowLevel - 1`). Note that desktop window will not receive focus, keyboard or mouse events, but you can use `globalShortcut` to receive input sparingly.
- On Windows, possible type is `toolbar`.

Instance Events

Objects created with `new BrowserWindow` emit the following events:

Note: Some events are only available on specific operating systems and are labeled as such.

Event: 'page-title-updated'

Returns:

- `event` Event
- `title` String

Emitted when the document changed its title, calling `event.preventDefault()` will prevent the native window's title from changing.

Event: 'close'

Returns:

- `event` Event

Emitted when the window is going to be closed. It's emitted before the `beforeunload` and `unload` event of the DOM. Calling `event.preventDefault()` will cancel the close.

Usually you would want to use the `beforeunload` handler to decide whether the window should be closed, which will also be called when the window is reloaded. In Electron, returning any value other than `undefined` would cancel the close. For example:

```
window.onbeforeunload = (e) => {
    console.log('I do not want to be closed')

    // Unlike usual browsers that a message box will be prompted to users, returning
    // a non-void value will silently cancel the close.
    // It is recommended to use the dialog API to let the user confirm closing the
    // application.
    e.returnValue = false // equivalent to `return false` but not recommended
  }
```

Note*: There is a subtle difference between the behaviors of* `window.onbeforeunload = handler` *and* `window.addEventListener('beforeunload', handler)`*. It is recommended to always set the* `event.returnValue` *explicitly, instead of just returning a value, as the former works more consistently within Electron.*

Event: 'closed'

Emitted when the window is closed. After you have received this event you should remove the reference to the window and avoid using it any more.

Event: 'session-end' *Windows*

Emitted when window session is going to end due to force shutdown or machine restart or session log off.

Event: 'unresponsive'

Emitted when the web page becomes unresponsive.

Event: 'responsive'

Emitted when the unresponsive web page becomes responsive again.

Event: 'blur'

Emitted when the window loses focus.

Event: 'focus'

Emitted when the window gains focus.

Event: 'show'

Emitted when the window is shown.

Event: 'hide'

Emitted when the window is hidden.

Event: 'ready-to-show'

Emitted when the web page has been rendered (while not being shown) and window can be displayed without a visual flash.

Event: 'maximize'

Emitted when window is maximized.

Event: 'unmaximize'

Emitted when the window exits from a maximized state.

Event: 'minimize'

Emitted when the window is minimized.

Event: 'restore'

Emitted when the window is restored from a minimized state.

Event: 'resize'

Emitted when the window is being resized.

Event: 'move'

Emitted when the window is being moved to a new position.

Note: On macOS this event is just an alias of `moved`.

Event: 'moved' *macOS*

Emitted once when the window is moved to a new position.

Event: 'enter-full-screen'

Emitted when the window enters a full-screen state.

Event: 'leave-full-screen'

Emitted when the window leaves a full-screen state.

Event: 'enter-html-full-screen'

Emitted when the window enters a full-screen state triggered by HTML API.

Event: 'leave-html-full-screen'

Emitted when the window leaves a full-screen state triggered by HTML API.

Event: 'app-command' *Windows*

Returns:

- `event` Event
- `command` String

Emitted when an App Command is invoked. These are typically related to keyboard media keys or browser commands, as well as the "Back" button built into some mice on Windows.

Commands are lowercased, underscores are replaced with hyphens, and the `APPCOMMAND_` prefix is stripped off. e.g. `APPCOMMAND_BROWSER_BACKWARD` is emitted as `browser-backward`.

```
const {BrowserWindow} = require('electron')
  let win = new BrowserWindow()
  win.on('app-command', (e, cmd) => {
    // Navigate the window back when the user hits their mouse back button
    if (cmd === 'browser-backward' && win.webContents.canGoBack()) {
      win.webContents.goBack()
    }
  })
```

Event: 'scroll-touch-begin' *macOS*

Emitted when scroll wheel event phase has begun.

Event: 'scroll-touch-end' *macOS*

Emitted when scroll wheel event phase has ended.

Event: 'scroll-touch-edge' *macOS*

Emitted when scroll wheel event phase filed upon reaching the edge of element.

Event: 'swipe' *macOS*

Returns:

- `event` Event
- `direction` String

Emitted on 3-finger swipe. Possible directions are `up`, `right`, `down`, `left`.

Event: 'sheet-begin' *macOS*

Emitted when the window opens a sheet.

Event: 'sheet-end' *macOS*

Emitted when the window has closed a sheet.

Event: 'new-window-for-tab' *macOS*

Emitted when the native new tab button is clicked.

Static Methods

The `BrowserWindow` class has the following static methods:

`BrowserWindow.getAllWindows()`

Returns `BrowserWindow[]` - An array of all opened browser windows.

`BrowserWindow.getFocusedWindow()`

Returns `BrowserWindow` - The window that is focused in this application, otherwise returns `null`.

`BrowserWindow.fromWebContents(webContents)`

- `webContents` WebContents

Returns `BrowserWindow` - The window that owns the given `webContents`.

`BrowserWindow.fromBrowserView(browserView)`

- `browserView` BrowserView

Returns `BrowserWindow | null` - The window that owns the given `browserView`. If the given view is not attached to any window, returns `null`.

`BrowserWindow.fromId(id)`

- `id` Integer

Returns `BrowserWindow` - The window with the given `id`.

`BrowserWindow.addExtension(path)`

- `path` String

Adds Chrome extension located at `path`, and returns extension's name.

The method will also not return if the extension's manifest is missing or incomplete.

Note: This API cannot be called before the `ready` event of the `app` module is emitted.

`BrowserWindow.removeExtension(name)`

- `name` String

Remove a Chrome extension by name.

Note: This API cannot be called before the `ready` event of the `app` module is emitted.

`BrowserWindow.getExtensions()`

Returns `Object` - The keys are the extension names and each value is an Object containing `name` and `version` properties.

Note: This API cannot be called before the `ready` event of the `app` module is emitted.

`BrowserWindow.addDevToolsExtension(path)`

- `path` String

Adds DevTools extension located at `path`, and returns extension's name.

The extension will be remembered so you only need to call this API once, this API is not for programming use. If you try to add an extension that has already been loaded, this method will not return and instead log a warning to the console.

The method will also not return if the extension's manifest is missing or incomplete.

Note: This API cannot be called before the `ready` event of the `app` module is emitted.

`BrowserWindow.removeDevToolsExtension(name)`

- `name` String

Remove a DevTools extension by name.

Note: This API cannot be called before the `ready` event of the `app` module is emitted.

`BrowserWindow.getDevToolsExtensions()`

Returns `Object` - The keys are the extension names and each value is an Object containing `name` and `version` properties.

To check if a DevTools extension is installed you can run the following:

```
const {BrowserWindow} = require('electron')

  let installed = BrowserWindow.getDevToolsExtensions().hasOwnProperty('devtron')
  console.log(installed)
```

Note: This API cannot be called before the `ready` event of the `app` module is emitted.

Instance Properties

Objects created with `new BrowserWindow` have the following properties:

```
const {BrowserWindow} = require('electron')
  // In this example `win` is our instance
  let win = new BrowserWindow({width: 800, height: 600})
  win.loadURL('https://github.com')
```

`win.webContents`

A `WebContents` object this window owns. All web page related events and operations will be done via it.

See the `webContents` documentation for its methods and events.

`win.id`

A `Integer` representing the unique ID of the window.

Instance Methods

Objects created with `new BrowserWindow` have the following instance methods:

Note: Some methods are only available on specific operating systems and are labeled as such.

`win.destroy()`

Force closing the window, the `unload` and `beforeunload` event won't be emitted for the web page, and `close` event will also not be emitted for this window, but it guarantees the `closed` event will be emitted.

`win.close()`

Try to close the window. This has the same effect as a user manually clicking the close button of the window. The web page may cancel the close though. See the close event.

`win.focus()`

Focuses on the window.

`win.blur()`

Removes focus from the window.

`win.isFocused()`

Returns `Boolean` - Whether the window is focused.

`win.isDestroyed()`

Returns `Boolean` - Whether the window is destroyed.

`win.show()`

Shows and gives focus to the window.

`win.showInactive()`

Shows the window but doesn't focus on it.

`win.hide()`

Hides the window.

`win.isVisible()`

Returns `Boolean` - Whether the window is visible to the user.

`win.isModal()`

Returns `Boolean` - Whether current window is a modal window.

`win.maximize()`

Maximizes the window. This will also show (but not focus) the window if it isn't being displayed already.

`win.unmaximize()`

Unmaximizes the window.

`win.isMaximized()`

Returns `Boolean` - Whether the window is maximized.

`win.minimize()`

Minimizes the window. On some platforms the minimized window will be shown in the Dock.

`win.restore()`

Restores the window from minimized state to its previous state.

`win.isMinimized()`

Returns `Boolean` - Whether the window is minimized.

`win.setFullScreen(flag)`

- `flag` Boolean

Sets whether the window should be in fullscreen mode.

`win.isFullScreen()`

Returns `Boolean` - Whether the window is in fullscreen mode.

`win.setSimpleFullScreen(flag)` ***macOS***

- `flag` Boolean

Enters or leaves simple fullscreen mode.

Simple fullscreen mode emulates the native fullscreen behavior found in versions of Mac OS X prior to Lion (10.7).

`win.isSimpleFullScreen()` ***macOS***

Returns `Boolean` - Whether the window is in simple (pre-Lion) fullscreen mode.

`win.setAspectRatio(aspectRatio[, extraSize])` ***macOS***

- `aspectRatio` Float - The aspect ratio to maintain for some portion of the content view.
- `extraSize` Size - The extra size not to be included while maintaining the aspect ratio.

This will make a window maintain an aspect ratio. The extra size allows a developer to have space, specified in pixels, not included within the aspect ratio calculations. This API already takes into account the difference between a window's size and its content size.

Consider a normal window with an HD video player and associated controls. Perhaps there are 15 pixels of controls on the left edge, 25 pixels of controls on the right edge and 50 pixels of controls below the player. In order to maintain a 16:9 aspect ratio (standard aspect ratio for HD @1920x1080) within the player itself we would call this function with arguments of 16/9 and [40, 50]. The second argument doesn't care where the extra width and height are within the content view--only that they exist. Just sum any extra width and height areas you have within the overall content view.

`win.previewFile(path[, displayName])` ***macOS***

- `path` String - The absolute path to the file to preview with QuickLook. This is important as Quick Look uses the file name and file extension on the path to determine the content type of the file to open.
- `displayName` String (optional) - The name of the file to display on the Quick Look modal view. This is purely visual and does not affect the content type of the file. Defaults to `path`.

Uses Quick Look to preview a file at a given path.

`win.closeFilePreview()` ***macOS***

Closes the currently open Quick Look panel.

`win.setBounds(bounds[, animate])`

- `bounds` Rectangle

- `animate` Boolean (optional) *macOS*

Resizes and moves the window to the supplied bounds

`win.getBounds()`

Returns `Rectangle`

`win.setContentBounds(bounds[, animate])`

- `bounds` Rectangle
- `animate` Boolean (optional) *macOS*

Resizes and moves the window's client area (e.g. the web page) to the supplied bounds.

`win.getContentBounds()`

Returns `Rectangle`

`win.setEnabled(enable)`

- `enable` Boolean

Disable or enable the window.

`win.setSize(width, height[, animate])`

- `width` Integer
- `height` Integer
- `animate` Boolean (optional) *macOS*

Resizes the window to `width` and `height`.

`win.getSize()`

Returns `Integer[]` - Contains the window's width and height.

`win.setContentSize(width, height[, animate])`

- `width` Integer
- `height` Integer
- `animate` Boolean (optional) *macOS*

Resizes the window's client area (e.g. the web page) to `width` and `height`.

`win.getContentSize()`

Returns `Integer[]` - Contains the window's client area's width and height.

`win.setMinimumSize(width, height)`

- `width` Integer
- `height` Integer

Sets the minimum size of window to `width` and `height`.

`win.getMinimumSize()`

Returns `Integer[]` - Contains the window's minimum width and height.

`win.setMaximumSize(width, height)`

- `width` Integer
- `height` Integer

Sets the maximum size of window to `width` and `height`.

`win.getMaximumSize()`

Returns `Integer[]` - Contains the window's maximum width and height.

`win.setResizable(resizable)`

- `resizable` Boolean

Sets whether the window can be manually resized by user.

`win.isResizable()`

Returns `Boolean` - Whether the window can be manually resized by user.

`win.setMovable(movable)` ***macOS Windows***

- `movable` Boolean

Sets whether the window can be moved by user. On Linux does nothing.

`win.isMovable()` ***macOS Windows***

Returns `Boolean` - Whether the window can be moved by user.

On Linux always returns `true`.

`win.setMinimizable(minimizable)` ***macOS Windows***

- `minimizable` Boolean

Sets whether the window can be manually minimized by user. On Linux does nothing.

`win.isMinimizable()` ***macOS Windows***

Returns `Boolean` - Whether the window can be manually minimized by user

On Linux always returns `true`.

`win.setMaximizable(maximizable)` ***macOS Windows***

- `maximizable` Boolean

Sets whether the window can be manually maximized by user. On Linux does nothing.

`win.isMaximizable()` ***macOS Windows***

Returns `Boolean` - Whether the window can be manually maximized by user.

On Linux always returns `true`.

`win.setFullScreenable(fullscreenable)`

- `fullscreenable` Boolean

Sets whether the maximize/zoom window button toggles fullscreen mode or maximizes the window.

`win.isFullScreenable()`

Returns `Boolean` - Whether the maximize/zoom window button toggles fullscreen mode or maximizes the window.

`win.setClosable(closable)` ***macOS Windows***

- `closable` Boolean

Sets whether the window can be manually closed by user. On Linux does nothing.

`win.isClosable()` ***macOS Windows***

Returns `Boolean` - Whether the window can be manually closed by user.

On Linux always returns `true`.

`win.setAlwaysOnTop(flag[, level][, relativeLevel])`

- `flag` Boolean
- `level` String (optional) *macOS* - Values include `normal`, `floating`, `torn-off-menu`, `modal-panel`, `main-menu`, `status`, `pop-up-menu`, `screen-saver`, and ~~dock~~ (Deprecated). The default is `floating`. See the macOS docs for more details.
- `relativeLevel` Integer (optional) *macOS* - The number of layers higher to set this window relative to the given `level`. The default is `0`. Note that Apple discourages setting levels higher than 1 above `screen-saver`.

Sets whether the window should show always on top of other windows. After setting this, the window is still a normal window, not a toolbox window which can not be focused on.

`win.isAlwaysOnTop()`

Returns `Boolean` - Whether the window is always on top of other windows.

`win.center()`

Moves window to the center of the screen.

`win.setPosition(x, y[, animate])`

- `x` Integer
- `y` Integer

- `animate` Boolean (optional) *macOS*

Moves window to `x` and `y`.

`win.getPosition()`

Returns `Integer[]` - Contains the window's current position.

`win.setTitle(title)`

- `title` String

Changes the title of native window to `title`.

`win.getTitle()`

Returns `String` - The title of the native window.

Note: The title of web page can be different from the title of the native window.

`win.setSheetOffset(offsetY[, offsetX])` *macOS*

- `offsetY` Float
- `offsetX` Float (optional)

Changes the attachment point for sheets on macOS. By default, sheets are attached just below the window frame, but you may want to display them beneath a HTML-rendered toolbar. For example:

```
const {BrowserWindow} = require('electron')
  let win = new BrowserWindow()

  let toolbarRect = document.getElementById('toolbar').getBoundingClientRect()
  win.setSheetOffset(toolbarRect.height)
```

`win.flashFrame(flag)`

- `flag` Boolean

Starts or stops flashing the window to attract user's attention.

`win.setSkipTaskbar(skip)`

- `skip` Boolean

Makes the window not show in the taskbar.

`win.setKiosk(flag)`

- `flag` Boolean

Enters or leaves the kiosk mode.

`win.isKiosk()`

Returns `Boolean` - Whether the window is in kiosk mode.

`win.getNativeWindowHandle()`

Returns `Buffer` - The platform-specific handle of the window.

The native type of the handle is `HWND` on Windows, `NSView*` on macOS, and `Window` (`unsigned long`) on Linux.

`win.hookWindowMessage(message, callback)` ***Windows***

- `message` Integer
- `callback` Function

Hooks a windows message. The `callback` is called when the message is received in the WndProc.

`win.isWindowMessageHooked(message)` ***Windows***

- `message` Integer

Returns `Boolean` - `true` or `false` depending on whether the message is hooked.

`win.unhookWindowMessage(message)` ***Windows***

- `message` Integer

Unhook the window message.

`win.unhookAllWindowMessages()` ***Windows***

Unhooks all of the window messages.

`win.setRepresentedFilename(filename)` ***macOS***

- `filename` String

Sets the pathname of the file the window represents, and the icon of the file will show in window's title bar.

`win.getRepresentedFilename()` ***macOS***

Returns `String` - The pathname of the file the window represents.

`win.setDocumentEdited(edited)` ***macOS***

- `edited` Boolean

Specifies whether the window’s document has been edited, and the icon in title bar will become gray when set to `true` .

`win.isDocumentEdited()` ***macOS***

Returns `Boolean` - Whether the window's document has been edited.

`win.focusOnWebView()`

`win.blurWebView()`

`win.capturePage([rect, ]callback)`

- `rect` Rectangle (optional) - The bounds to capture
- `callback` Function
  - `image` NativeImage

Same as `webContents.capturePage([rect, ]callback)`.

`win.loadURL(url[, options])`

- `url` String
- `options` Object (optional)
  - `httpReferrer` String (optional) - A HTTP Referrer url.
  - `userAgent` String (optional) - A user agent originating the request.
  - `extraHeaders` String (optional) - Extra headers separated by "\n"
  - `postData` (UploadRawData[] | UploadFile[] | UploadFileSystem[] | UploadBlob[]) (optional)
  - `baseURLForDataURL` String (optional) - Base url (with trailing path separator) for files to be loaded by the data url. This is needed only if the specified `url` is a data url and needs to load other files.

Same as `webContents.loadURL(url[, options])`.

The `url` can be a remote address (e.g. `http://`) or a path to a local HTML file using the `file://` protocol.

To ensure that file URLs are properly formatted, it is recommended to use Node's `url.format` method:

```
let url = require('url').format({
    protocol: 'file',
    slashes: true,
    pathname: require('path').join(__dirname, 'index.html')
  })

  win.loadURL(url)
```

You can load a URL using a `POST` request with URL-encoded data by doing the following:

```
win.loadURL('http://localhost:8000/post', {
    postData: [{
      type: 'rawData',
      bytes: Buffer.from('hello=world')
    }],
    extraHeaders: 'Content-Type: application/x-www-form-urlencoded'
  })
```

`win.loadFile(filePath)`

- `filePath` String

Same as `webContents.loadFile`, `filePath` should be a path to an HTML file relative to the root of your application. See the `webContents` docs for more information.

`win.reload()`

Same as `webContents.reload`.

`win.setMenu(menu)` ***Linux Windows***

- `menu` Menu | null

Sets the `menu` as the window's menu bar, setting it to `null` will remove the menu bar.

`win.setProgressBar(progress[, options])`

- `progress` Double
- `options` Object (optional)
  - `mode` String *Windows* - Mode for the progress bar. Can be `none`, `normal`, `indeterminate`, `error` or `paused`.

Sets progress value in progress bar. Valid range is [0, 1.0].

Remove progress bar when progress < 0; Change to indeterminate mode when progress > 1.

On Linux platform, only supports Unity desktop environment, you need to specify the `*.desktop` file name to `desktopName` field in `package.json`. By default, it will assume `app.getName().desktop`.

On Windows, a mode can be passed. Accepted values are `none`, `normal`, `indeterminate`, `error`, and `paused`. If you call `setProgressBar` without a mode set (but with a value within the valid range), `normal` will be assumed.

`win.setOverlayIcon(overlay, description)` ***Windows***

- `overlay` NativeImage - the icon to display on the bottom right corner of the taskbar icon. If this parameter is `null`, the overlay is cleared
- `description` String - a description that will be provided to Accessibility screen readers

Sets a 16 x 16 pixel overlay onto the current taskbar icon, usually used to convey some sort of application status or to passively notify the user.

`win.setHasShadow(hasShadow)` ***macOS***

- `hasShadow` Boolean

Sets whether the window should have a shadow. On Windows and Linux does nothing.

`win.hasShadow()` ***macOS***

Returns `Boolean` - Whether the window has a shadow.

On Windows and Linux always returns `true`.

`win.setOpacity(opacity)` ***Windows macOS***

- `opacity` Number - between 0.0 (fully transparent) and 1.0 (fully opaque)

Sets the opacity of the window. On Linux does nothing.

`win.getOpacity()` ***Windows macOS***

Returns `Number` - between 0.0 (fully transparent) and 1.0 (fully opaque)

`win.setThumbarButtons(buttons)` ***Windows***

- `buttons` ThumbarButton[]

Returns `Boolean` - Whether the buttons were added successfully

Add a thumbnail toolbar with a specified set of buttons to the thumbnail image of a window in a taskbar button layout. Returns a `Boolean` object indicates whether the thumbnail has been added successfully.

The number of buttons in thumbnail toolbar should be no greater than 7 due to the limited room. Once you setup the thumbnail toolbar, the toolbar cannot be removed due to the platform's limitation. But you can call the API with an empty array to clean the buttons.

The `buttons` is an array of `Button` objects:

- `Button` Object
  - `icon` NativeImage - The icon showing in thumbnail toolbar.
  - `click` Function
  - `tooltip` String (optional) - The text of the button's tooltip.
  - `flags` String - Control specific states and behaviors of the button. By default, it is `['enabled']`.

The `flags` is an array that can include following `String`s:

- `enabled` - The button is active and available to the user.
- `disabled` - The button is disabled. It is present, but has a visual state indicating it will not respond to user action.
- `dismissonclick` - When the button is clicked, the thumbnail window closes immediately.
- `nobackground` - Do not draw a button border, use only the image.
- `hidden` - The button is not shown to the user.
- `noninteractive` - The button is enabled but not interactive; no pressed button state is drawn. This value is intended for instances where the button is used in a notification.

`win.setThumbnailClip(region)` ***Windows***

- `region` Rectangle - Region of the window

Sets the region of the window to show as the thumbnail image displayed when hovering over the window in the taskbar. You can reset the thumbnail to be the entire window by specifying an empty region: `{x: 0, y: 0, width: 0, height: 0}`.

`win.setThumbnailToolTip(toolTip)` ***Windows***

- `toolTip` String

Sets the toolTip that is displayed when hovering over the window thumbnail in the taskbar.

`win.setAppDetails(options)` ***Windows***

- `options` Object

  - `appId` String (optional) - Window's App User Model ID. It has to be set, otherwise the other options will have no effect.
  - `appIconPath` String (optional) - Window's Relaunch Icon.
  - `appIconIndex` Integer (optional) - Index of the icon in `appIconPath`. Ignored when `appIconPath` is not set. Default is `0`.
  - `relaunchCommand` String (optional) - Window's Relaunch Command.
  - `relaunchDisplayName` String (optional) - Window's Relaunch Display Name.

Sets the properties for the window's taskbar button.

Note: `relaunchCommand` and `relaunchDisplayName` must always be set together. If one of those properties is not set, then neither will be used.

`win.showDefinitionForSelection()` ***macOS***

Same as `webContents.showDefinitionForSelection()`.

`win.setIcon(icon)` ***Windows Linux***

- `icon` NativeImage

Changes window icon.

`win.setAutoHideMenuBar(hide)`

- `hide` Boolean

Sets whether the window menu bar should hide itself automatically. Once set the menu bar will only show when users press the single `Alt` key.

If the menu bar is already visible, calling `setAutoHideMenuBar(true)` won't hide it immediately.

`win.isMenuBarAutoHide()`

Returns `Boolean` - Whether menu bar automatically hides itself.

`win.setMenuBarVisibility(visible)` ***Windows Linux***

- `visible` Boolean

Sets whether the menu bar should be visible. If the menu bar is auto-hide, users can still bring up the menu bar by pressing the single `Alt` key.

`win.isMenuBarVisible()`

Returns `Boolean` - Whether the menu bar is visible.

`win.setVisibleOnAllWorkspaces(visible)`

- `visible` Boolean

Sets whether the window should be visible on all workspaces.

Note: This API does nothing on Windows.

`win.isVisibleOnAllWorkspaces()`

Returns `Boolean` - Whether the window is visible on all workspaces.

Note: This API always returns false on Windows.

`win.setIgnoreMouseEvents(ignore[, options])`

- `ignore` Boolean
- `options` Object (optional)
  - `forward` Boolean (optional) *Windows* - If true, forwards mouse move messages to Chromium, enabling mouse related events such as `mouseleave`. Only used when `ignore` is true. If `ignore` is false, forwarding is always disabled regardless of this value.

Makes the window ignore all mouse events.

All mouse events happened in this window will be passed to the window below this window, but if this window has focus, it will still receive keyboard events.

`win.setContentProtection(enable)` ***macOS Windows***

- `enable` Boolean

Prevents the window contents from being captured by other apps.

On macOS it sets the NSWindow's sharingType to NSWindowSharingNone. On Windows it calls SetWindowDisplayAffinity with `WDA_MONITOR`.

`win.setFocusable(focusable)` ***Windows***

- `focusable` Boolean

Changes whether the window can be focused.

`win.setParentWindow(parent)` ***Linux macOS***

- `parent` BrowserWindow

Sets `parent` as current window's parent window, passing `null` will turn current window into a top-level window.

`win.getParentWindow()`

Returns `BrowserWindow` - The parent window.

`win.getChildWindows()`

Returns `BrowserWindow[]` - All child windows.

`win.setAutoHideCursor(autoHide)` ***macOS***

- `autoHide` Boolean

Controls whether to hide cursor when typing.

`win.selectPreviousTab()` ***macOS***

Selects the previous tab when native tabs are enabled and there are other tabs in the window.

`win.selectNextTab()` ***macOS***

Selects the next tab when native tabs are enabled and there are other tabs in the window.

`win.mergeAllWindows()` ***macOS***

Merges all windows into one window with multiple tabs when native tabs are enabled and there is more than one open window.

`win.moveTabToNewWindow()` ***macOS***

Moves the current tab into a new window if native tabs are enabled and there is more than one tab in the current window.

`win.toggleTabBar()` ***macOS***

Toggles the visibility of the tab bar if native tabs are enabled and there is only one tab in the current window.

`win.addTabbedWindow(browserWindow)` ***macOS***

- `browserWindow` BrowserWindow

Adds a window as a tab on this window, after the tab for the window instance.

`win.setVibrancy(type)` ***macOS***

- `type` String - Can be `appearance-based`, `light`, `dark`, `titlebar`, `selection`, `menu`, `popover`, `sidebar`, `medium-light` or `ultra-dark`. See the macOS documentation for more details.

Adds a vibrancy effect to the browser window. Passing `null` or an empty string will remove the vibrancy effect on the window.

`win.setTouchBar(touchBar)` ***macOS Experimental***

- `touchBar` TouchBar

Sets the touchBar layout for the current window. Specifying `null` or `undefined` clears the touch bar. This method only has an effect if the machine has a touch bar and is running on macOS 10.12.1+.

Note: The TouchBar API is currently experimental and may change or be removed in future Electron releases.

`win.setBrowserView(browserView)` ***Experimental***

- `browserView` BrowserView

`win.getBrowserView()` ***Experimental***

Returns `BrowserView | null` - an attached BrowserView. Returns `null` if none is attached.

Note: The BrowserView API is currently experimental and may change or be removed in future Electron releases.