Building Chrome Extensions

Karin Wefald • 11.19.2015

METEOR
npm
UNDERSCORE.JS
Sammy.js
browserify
&
Knockout.
BACKBONE.JS
Breeze
ANGULARJS
express
ember
HO
H
O
OCH3
DERBY
YO
Cappuccino
TypeScript
node
JS
JayData
mongoDB

ThingyJS

“Google Chrome Extensions are applications that run inside the Chrome browser and provide additional functionality, integration with third party websites or services, and customized browsing experiences.”

- Chrome Extensions Developer Guide (https://developer.chrome.com/extensions)

Difference between Plugin and Extension

Plugin

- Third party software that is meant to interact with a certain program.
- For example; for a web browser you would need to install a plug-in called flash player in order to play videos. Flash player is not native to any browser but is made by a separate company altogether.
- Compatible with most/all of the popular web browsers like IE, Firefox, and Opera.

Extension

- Extends the functionality of a certain program but they are usually meant to function on a certain program or browser.
- Extensions that are meant for Firefox would only work with Firefox and so would for other browsers.
- Simply pieces of code that you can use to modify the interface.
- For example, toolbars.

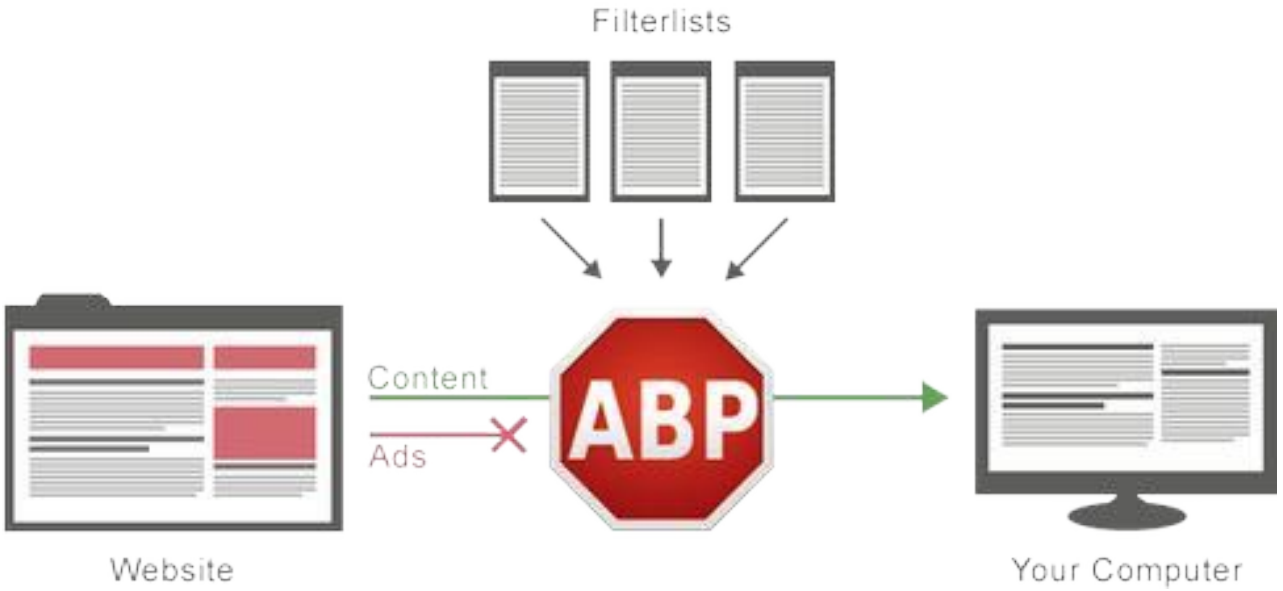
Types of Extensions

Examples

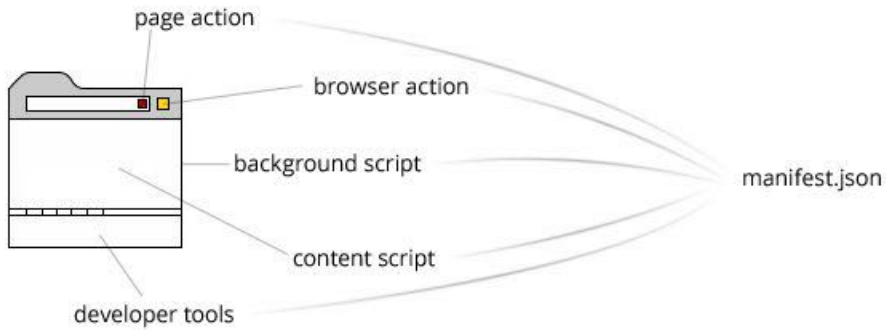
- AdBlock
- StayFocusd
- Netflix
- Pocket
- PushBullet

https://chrome.google.com/webstore/category/extensions

How does Ad Block work?



Chrome Extensions in Action



- A manifest file
- One or more HTML files
- *Optional:* One or more JavaScript files
- *Optional:* Any other files your extension needs—for example, image files

Manifest.json

```
{
  "manifest_version" : 2,

  "name" : "Hello World",
  "description" : "Hello World",
  "version" : "0.1",

  "browser_action" : {
    "default_icon": "minion.png",
    "default_popup": "popup.html"
  },

  "background" :  {
    "scripts" : ["js/background.js"],
    "persistent" : false
  }
}

```

manifest_version: One integer specifying the version of the manifest file format your package requires. As of Chrome 18, developers *should* specify 2.

browser_action: A browser action can have an icon, a tooltip, a badge, and a popup. If a browser action has a popup, the popup appears when the user clicks the icon. The popup can contain any HTML contents that you like, and it's automatically sized to fit its contents.

Background.js and HTML

The background page is an page that runs in the extension process.

It exists for the lifetime of your extension, and only one instance of it at a time is active.

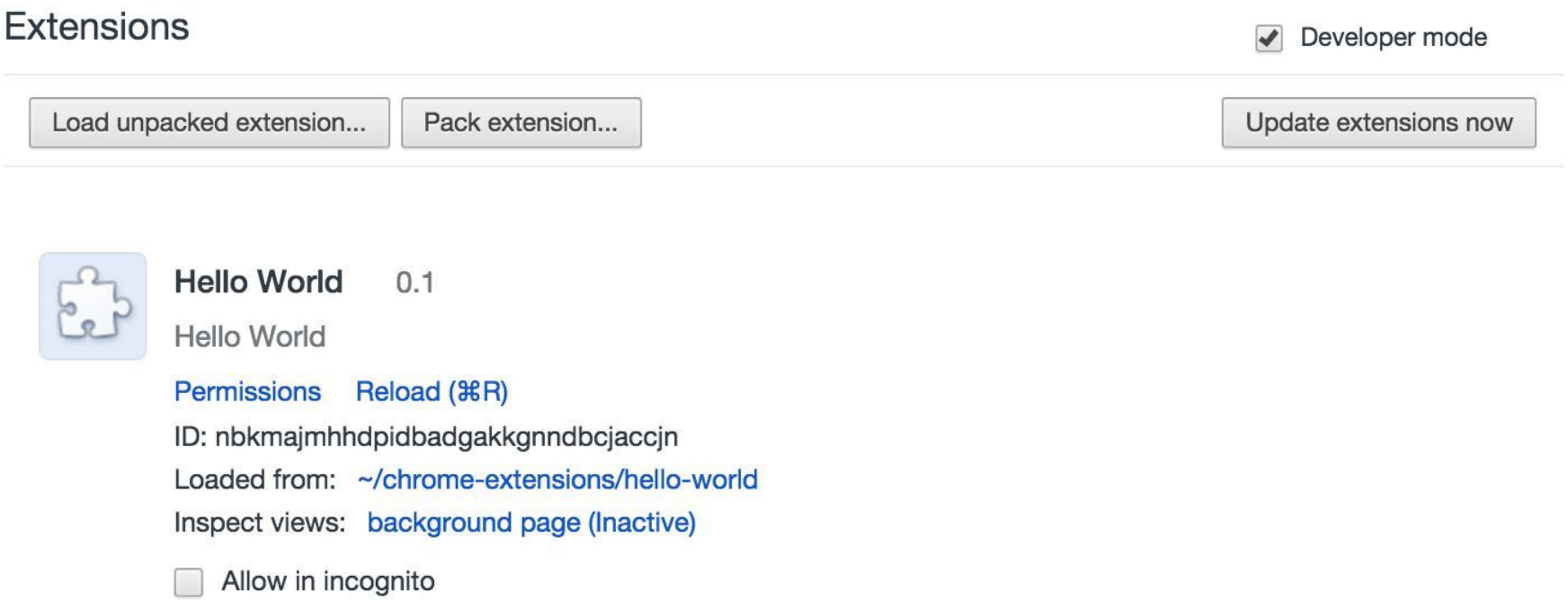
js/background.js

```
(function(){

  alert("Hello World");

})();

```

popup.html

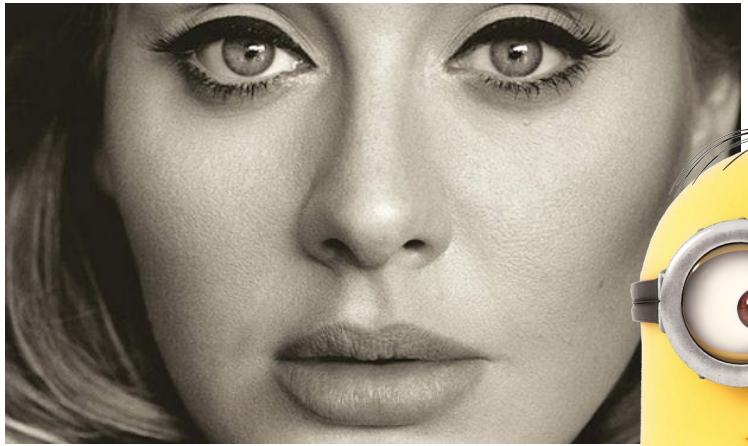
```
<!DOCTYPE html>
<html>
  <head>
    <title>Hello World Demo</title>

    <script type="text/javascript" src="js/background.js"></script>

  </head>
  <body>
    <h1>Hello!</h1>
  </body>
</html>

```

chrome://extensions/



Demos

- Hello
- Content Script
- NY Times API



APIs

Javascript APIs-

https://developer.chrome.com/extensions/api_index

Web APIs-

https://developer.chrome.com/extensions/api_other