Google Chrome Extensions



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Jump Start

Introduction

- The google chrome extensions are small programs that modify the google chrome web browser.
- The main technologies in use when developing google chrome extensions include web technologies, such as HTML, JavaScript and CSS.

The manifest.json File

 The purpose of this file is to describe the extension and provides its meta data to the web browser.

```
{
  "name": "My Hello World Extension",
  "version": "1.0",
  "manifest_version": 2,
  "description": "This extensions prints Hello World",
  "browser_action": {
    "default_icon": "helloicon.png",
    "default_popup": "hello.html"
  }
}
```



The HTML File

 We shall place the HTML file within the same folder that includes the files of the new extension. The HTML file cannot reside out of that folder.

<h1>Hello World!</h1>

The icon File

 The icon file should be with the PNG format. It should be with the 19x19 dimension.



- When developing extensions for the google chrome web browser we better switch to Developer Mode.
- In order to switch into that mode we should first select Tools->Extensions.

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 On top right we can find a +/- sign we can use to turn on/off the Developer Mode state.

Developer mode



Loading The Extension

- Once the developer mode is turned on we can easily load the extension we developed.
- On top left we can find the Load unpacked extension button.
- When developing an extension we should create a separated folder for holding its files. In order to load an extension we just need to select its folder.

Loading The Extension

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Loading The Extension

Running The Extension

 Once the extension was loaded we can now test it. Pressing the icon of the new extension should pop up a floating for displaying the extension in action.

Running The Extension

Packing The Extension

 Once the extension was loaded we can easily pack it as a crx file. We just need to select the folder that holds the files of our extension.

Packing The Extension

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Packing The Extension

The .crx File Format

 The .crx file format is zip. It is a bundle of files such as HTML, CSS, JavaScript, images and any other file required for rendering the extension on the web browser screen.

Available APIs

- The extension is a web page that can use all APIs available for web pages, such as HTML5 and Ajax.
- The extension code can interact with web pages or servers using content scripts or the XMLHttpRequests object.
- The extension code can interact with the web browser, get data it uses and change its behavior.

Browser & Page Actions UI

- The extension can add its user interface to the google chrome web browser by adding either a browser action or a page action.
- Each extension can have one browser action or one page action (at the most).
- The browser action adds a user interface that will be displayed no matter which web page is browsed. The page action adds a user interface that will be displayed when browsing a specific web page only.

Other Types of UI

 The extension can add its user interface in other ways such as changing the context menu, including its own web page and changing the appearance of web pages (using content scripts).