



# Google Chrome Extensions How-to



# Contents





# Contents

- Intro



# Contents

- Intro
- Features



# Contents

- Intro
- Features
- Coding



# Contents

- Intro
- Features
- Coding
- Hello World



# Contents

- Intro
- Features
- Coding
- Hello World
- Q&A



# Introduction



# What are Extensions?

- Extensions are extra features and functionality that you can easily add to Google Chrome.



# What are Extensions?

- Extensions are extra features and functionality that you can easily add to Google Chrome.
- By using extensions, you can customize Google Chrome with features you like, while keeping your browser free of things that you don't use.

# Why we need Extensions





# Why we need Extensions

- Enhancing the usability of Chrome by adding (or removing) many features to it.



# Why we need Extensions

- Enhancing the usability of Chrome by adding (or removing) many features to it.
- Change the way we surf the websites by organizing stuff according to user's wish.



# Why we need Extensions

- Enhancing the usability of Chrome by adding (or removing) many features to it.
- Change the way we surf the websites by organizing stuff according to user's wish.
- Blocking unwanted things like advertisements, popups, etc.



# Why we need Extensions

- Enhancing the usability of Chrome by adding (or removing) many features to it.
- Change the way we surf the websites by organizing stuff according to user's wish.
- Blocking unwanted things like advertisements, popups, etc.
- Change the look of websites and browser.



# Why we need Extensions

- Enhancing the usability of Chrome by adding (or removing) many features to it.
- Change the way we surf the websites by organizing stuff according to user's wish.
- Blocking unwanted things like advertisements, popups, etc.
- Change the look of websites and browser.
- Sharing and bookmarking information in a much easier way.



# Why we need Extensions

- Enhancing the usability of Chrome by adding (or removing) many features to it.
- Change the way we surf the websites by organizing stuff according to user's wish.
- Blocking unwanted things like advertisements, popups, etc.
- Change the look of websites and browser.
- Sharing and bookmarking information in a much easier way.
- Desktop Notifications and much More....!

# Stats





# Stats

- 300+ extensions at launch



# Stats

- 300+ extensions at launch
- 750+ new extensions / month



# Stats

- 300+ extensions at launch
- 750+ new extensions / month
- 10M+ extension installs / month



# Stats

- 300+ extensions at launch
- 750+ new extensions / month
- 10M+ extension installs / month
- 15%+ of users have extensions



Extensions Are Webpages



mostly  
Extensions Are Webpages



mostly  
Extensions Are Webpages

# Similarities





# Similarities

- HTML, CSS, and JavaScript



# Similarities

- HTML, CSS, and JavaScript
- Development and debugging



# Similarities

- HTML, CSS, and JavaScript
- Development and debugging
- DOM, XHR, HTML5, WebKit, and V8



# Extra Features

# More UI Surfaces





# More UI Surfaces

- Browser action



# More UI Surfaces

- Browser action





# More UI Surfaces

- Browser action



# More UI Surfaces





# More UI Surfaces

- Page action



# More UI Surfaces

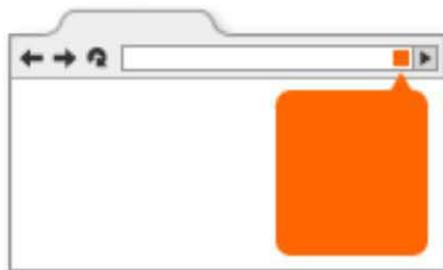
- Page action





# More UI Surfaces

- Page action



# More UI Surfaces





# More UI Surfaces

- Content scripts



# More UI Surfaces

- Content scripts



# More UI Surfaces





# More UI Surfaces

- Desktop notifications

# More UI Surfaces



- Desktop notifications



# More UI Surfaces





# More UI Surfaces

- Infobars



# More UI Surfaces

- Infobars



# More UI Surfaces





# More UI Surfaces

- Context menu



# More UI Surfaces

- Context menu



A photograph of laboratory glassware. In the foreground, a graduated cylinder contains a blue liquid. Behind it, a larger beaker also contains a blue liquid. A glass dropper is positioned above the beaker. The background is a plain, light-colored wall.

# APIs and Coding

# Pre-Requisites





# Pre-Requisites

- You may need the following to start developing a successful chrome extension.
  - Google Chrome Browser
- What else???????????



# Pre-Requisites

- You may need the following to start developing a successful chrome extension.

- Google Chrome Browser

What else???????????

Nothing !



# Pre-Requisites

- You may need the following to start developing a successful chrome extension.
- Google Chrome Browser
- Knowledge required:
  - HTML



# Pre-Requisites

- You may need the following to start developing a successful chrome extension.
- Google Chrome Browser
- Knowledge required:
  - HTML
  - CSS



# Pre-Requisites

- You may need the following to start developing a successful chrome extension.
- Google Chrome Browser
- Knowledge required:
  - HTML
  - CSS
  - JAVASCRIPT



# Pre-Requisites

- You may need the following to start developing a successful chrome extension.
- Google Chrome Browser
- Knowledge required:
  - HTML
  - CSS
  - JAVASCRIPT
  - GOOGLE CHROME EXTENSION API

# Privileged APIs





# Privileged APIs

- chrome.windows



# Privileged APIs

- chrome.windows
- chrome.tabs



# Privileged APIs

- chrome.windows
- chrome.tabs
- chrome.history



# Privileged APIs

- chrome.windows
- chrome.tabs
- chrome.history
- chrome.bookmarks

# Privileged APIs





# Privileged APIs

- chrome.browserAction



# Privileged APIs

- chrome.browserAction
- chrome.pageAction



# Privileged APIs

- chrome.browserAction
- chrome.pageAction
- chrome.extension



# Privileged APIs

- chrome.browserAction
- chrome.pageAction
- chrome.extension
- chrome.i18n

# Components





# Components

- Manifest file



# Components

- Manifest file
- Background page



# Components

- Manifest file
- Background page
- Options page



# Useful functions

- Store item in local storage.
- Gets item from local storage with specified key.
- Creating Logs.
- Clearing local storage and logs.



# Store item in local storage.

```
function.setItem(key, value) {  
    try {  
        log("Storing [" + key + ":" + value + "]");  
        window.localStorage.removeItem(key); // Local storage  
  
        window.localStorage.setItem(key,value); // Local storage  
    }  
    catch(e) {  
        log("Error inside setItem");  
        log(e);  
    }  
    log("Return from setItem" + key + ":" + value);  
}
```



# Gets item from local storage with specified key

```
function getItem(key) {  
    var value;  
    log('Retrieving key [' + key + ']');  
    try {  
        value= window.localStorage.getItem(key); //Local Storage  
    }  
    catch(e) {  
        log("Error inside getItem() for key:" + key);  
        log(e);  
        value = "null";    }  
        log("Returning value: " + value);  
    return value;  
}
```



# Creating logs

```
function log(txt)
{
    if(logging) {
        console.log(txt);
    }
}
```



# Clearing local storage and logs

```
function clearStrg() {  
    log('about to clear local storage');  
    window.localStorage.clear(); // Local storage  
    log('cleared');  
}
```



HELLO

Hello I/O!

# Steps





# Steps

- Create directory



# Steps

- Create directory
- Create manifest file



# Steps

- Create directory
- Create manifest file
- Add icons
- Create popup



# Steps

- Create directory
- Create manifest file
- Add icons
- Create popup
- Upload to gallery



# Steps

- Create directory
- Create manifest file
- Add icons
- Create popup
- Upload to gallery
- ?



# Steps

- Create directory
- Create manifest file
- Add icons
- Create popup
- Upload to gallery
- ?
- Profit



# Steps

- Create directory
- Create manifest file
- Add icons
- Create popup
- Upload to gallery
- ?
- Profit



# Steps

- Create directory
- Create manifest file
- Add icons
- Create popup
- Upload to gallery
- ? *Web Store!*
- Profit

# Create directory





# Create directory

- Create a folder anywhere in your pc



# Create directory

- Create a folder anywhere in your pc
- Create a .json file using notepad and put the code inside. (json is abb. of javascript object notation.)



# Create directory

- Create a folder anywhere in your pc
- Create a .json file using notepad and put the code inside. (json is abb. of javascript object notation.)
- Put an icon for the extension.



# Create directory

- Create a folder anywhere in your pc
- Create a .json file using notepad and put the code inside. (json is abb. of javascript object notation.)
- Put an icon for the extension.
- Put all your html, css, javascript files inside the respective folder



# Create directory

- Create a folder anywhere in your pc
- Create a .json file using notepad and put the code inside. (json is abb. of javascript object notation.)
- Put an icon for the extension.
- Put all your html, css, javascript files inside the respective folder
- Click on  icon -> tools ->extensions



# Create directory

- Create a folder anywhere in your pc
- Create a .json file using notepad and put the code inside. (json is abb. of javascript object notation.)
- Put an icon for the extension.
- Put all your html, css, javascript files inside the respective folder
- Click on  icon -> tools ->extensions
- Expand developer mode -> click load unpacked extension button



# Create directory

- Create a folder anywhere in your pc
- Create a .json file using notepad and put the code inside. (json is abb. of javascript object notation.)
- Put an icon for the extension.
- Put all your html, css, javascript files inside the respective folder
- Click on  icon -> tools ->extensions
- Expand developer mode -> click load unpacked extension button
- In file explorer, browse for your folder where you created files and click OK



# Create manifest file

Manifest file (manifest.json)

```
{  
//name of your extension  
"name": "My First Extension",  
  
//version of your extension  
"version": "1.0",  
  
//description about the function of your extension  
"description": "The first extension that I made.",  
  
//involves all browser related interactions  
"browser_action": { "default_icon": "icon.png" },  
  
//sites which your extension is allowed to access  
"permissions": [ http:///*/*, " https:///*/*" ]  
}
```



# Create popup

This is the file which pops out when you click the extension icon in the browser. Put any html code here and you get the output in popup.

```
<html>
  <font color= "red" >
    Hello world!
  </font>
</html>
```



# Uploading extension

- Go to <https://chrome.google.com/webstore>



# Uploading extension

- Go to <https://chrome.google.com/webstore>
- Go to developer dashboard and sign in with your google account.



# Uploading extension

- Go to <https://chrome.google.com/webstore>
- Go to developer dashboard and sign in with your google account.
- Click add new item button



# Uploading extension

- Go to <https://chrome.google.com/webstore>
- Go to developer dashboard and sign in with your google account.
- Click add new item button
- Browse for the file and upload it.



# Uploading extension

- Go to <https://chrome.google.com/webstore>
- Go to developer dashboard and sign in with your google account.
- Click add new item button
- Browse for the file and upload it.
- Enjoy !



Questions



# Resources

Docs:

- [code.google.com/chrome/extensions/](http://code.google.com/chrome/extensions/)

Discussion group:

- [j.mp/crxgroup](http://j.mp/crxgroup)

Blog:

- [blog.chromium.org/](http://blog.chromium.org/)



# Thank You! (:

T.V. Vignesh  
9535679593

Paramjot Singh  
9740405365

Website: [www.lugmanipal.org](http://www.lugmanipal.org)