



# Strategies for Digital Wellbeing

Prototyping for the Digital Wellbeing  
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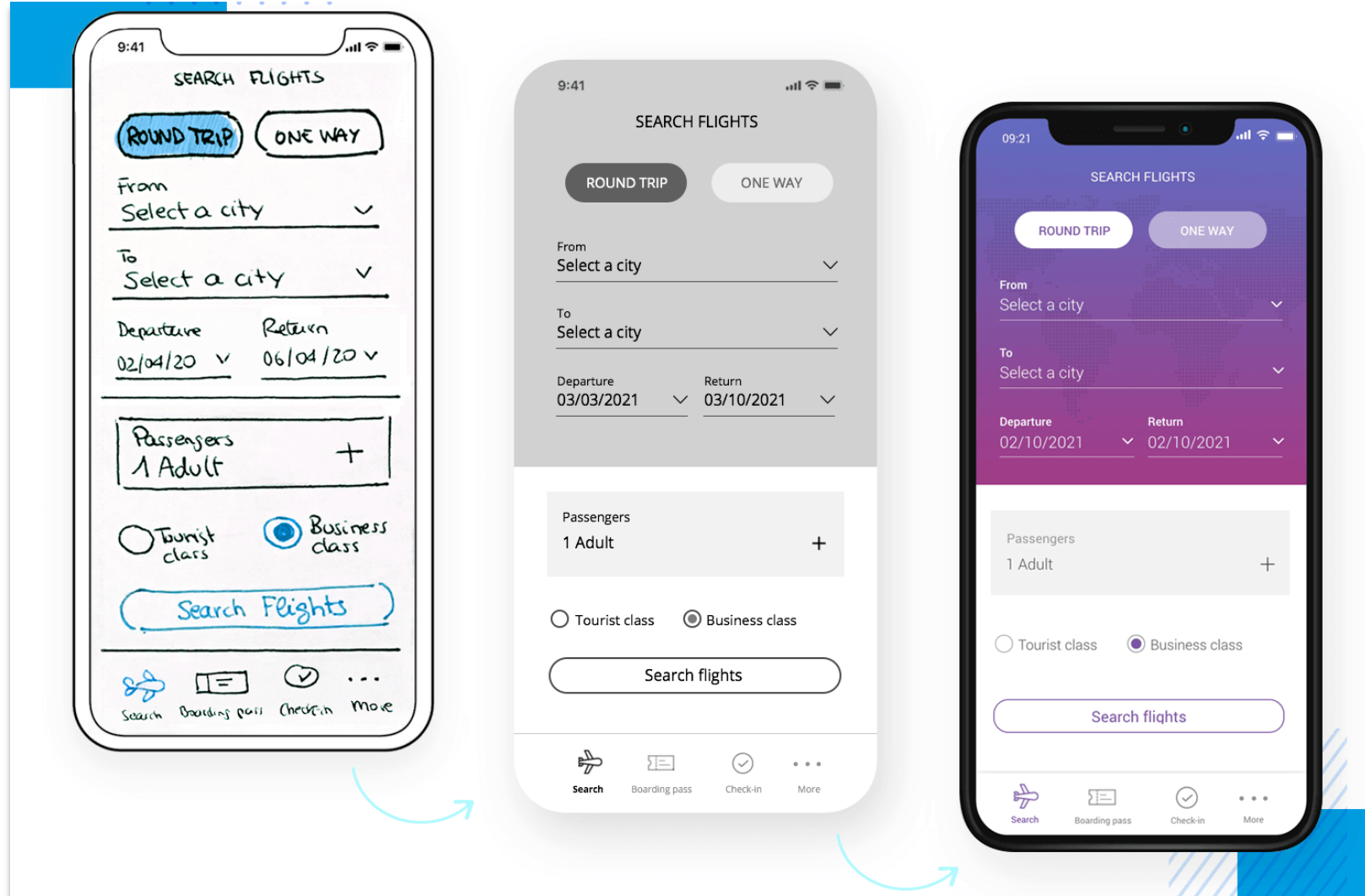
# Prototypes

- «A prototype is a concrete but partial representation or implementation of a system design»
- «An easily modified and extensible model (representation, simulation or demonstration) of a planned software system, likely including its interface and input/output functionality»
- One of the most powerful tools for design exploration, visualization, and testing
- They let us ‘see’ and ‘feel’ interactivity (simulated or real)

# Prototypes

- **Envisionment:** making ideas visible
  - Generating new ideas
  - Evaluating new ideas (within the design group)
  - Testing new ideas (with users)
- Different tools and techniques, according to
  - The stage of design (early, ..., advanced, final)
  - The intended audience (designers, test users, clients, management, ...)

# Fidelity: Different Information Is Conveyed



# Figma

A Tool for Rapid Prototyping

# Overview

- Figma is a collaborative interface design tool: <https://www.figma.com/>
  - entirely browser-based;
  - free for students;
  - allows real-time collaboration on the same file.
- Some starting points:
  - <https://www.figma.com/community/file/917793002372330875>
  - [https://www.youtube.com/watch?v=v\\_1DhO-Vcgc](https://www.youtube.com/watch?v=v_1DhO-Vcgc) (from the HCI course)

# Chrome Extensions

Prototyping DSCTs for the Web

# Overview

- Extensions are written with the same web technologies used to create web applications:
  - **HTML** is used as a content markup language;
  - **CSS** is used for styling;
  - **JavaScript** is used for scripting and logic.
- A Chrome extension can access two different set of APIs:
  - “traditional” JavaScript APIs (<https://developer.mozilla.org/en-US/docs/Web/API>);
  - Chrome APIs (<https://developer.chrome.com/docs/extensions/reference/>).



# Ingredients

- The **Manifest**:
  - required file;
  - must have a specific file name: manifest.json;
  - it must be located in the extension's root directory;
  - it records important metadata, defines resources, declares permissions, and identifies which files to run in the background and on the page.
- The **Service Worker**:
  - handles and listens for browser events (e.g., navigating to a new page, closing a tab, ... );
  - it can use the Chrome APIs, but it cannot directly interact with the content of web pages.

# Ingredients

- **Content Scripts:**

- execute Javascript in the context of a web
- read and modify the DOM of the pages they're injected into.
- can only use a subset of the Chrome APIs:
  - may interact with a service worker to access additional APIs

- **The **Popup** and **other pages**:**

- an extension can include various HTML files, such as a popup, an options page, and other HTML pages;
- all these pages have access to Chrome APIs.

# Hello, World!

1. Create a directory for your extension
2. Create a file named *manifest.json* and add the following code:

```
{  
  "manifest_version": 3,  
  "name": "Hello Extensions",  
  "description": "Base Level Extension",  
  "version": "1.0",  
  "action": {  
    "default_popup": "hello.html",  
    "default_icon": "hello_extensions.png" }  
}
```

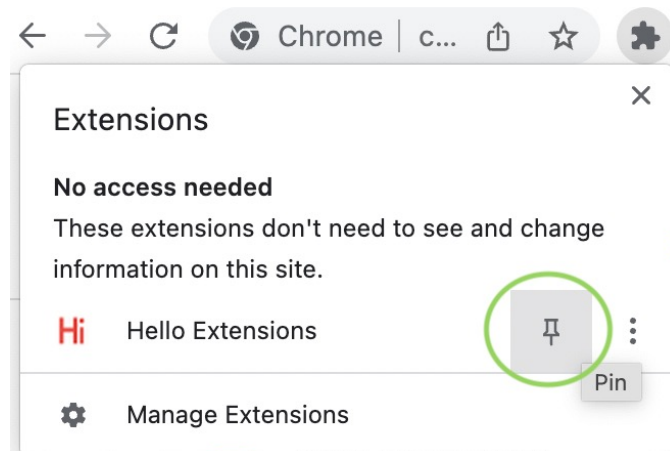
# Hello, World!

3. [Download](#) the icon for the extension and save it in the directory with the name “*hello-extension.png*”
4. Create a file named *hello.html* and add the following code:

```
<html>
  <body>
    <h1>Hello, World!</h1>
  </body>
</html>
```

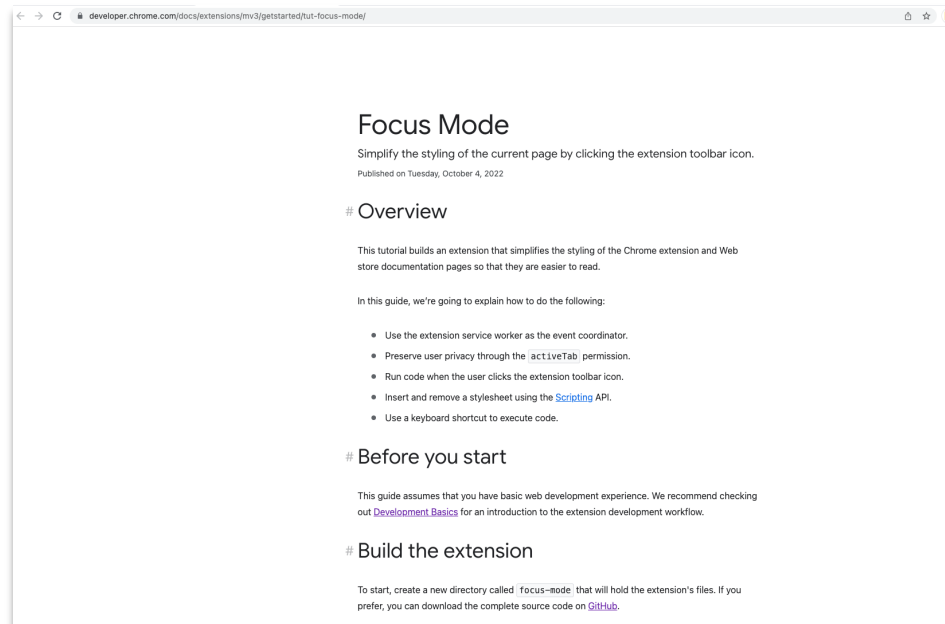
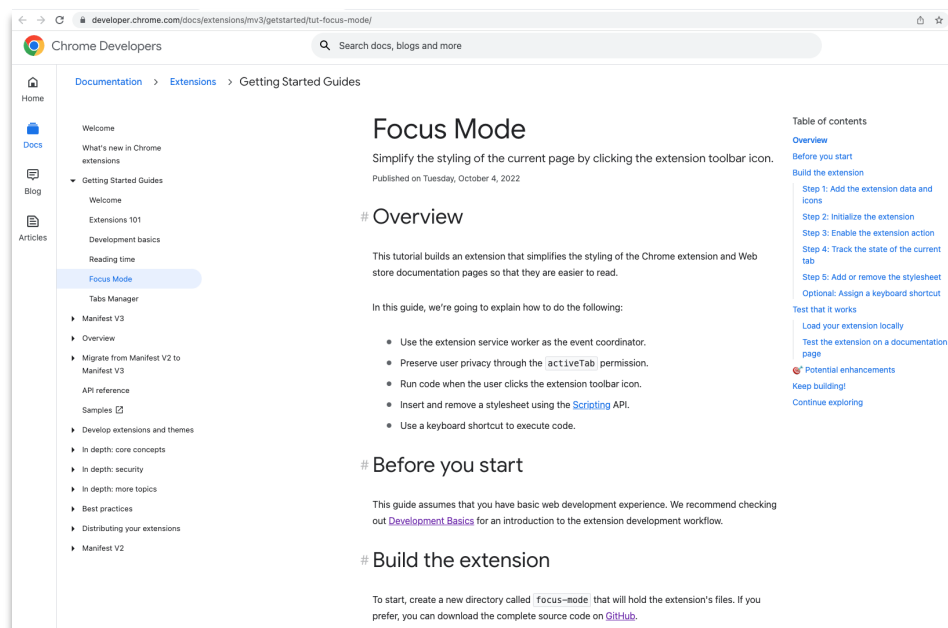
# Hello, World!

5. Load the extension as an an unpacked extension:
  - go to `chrome://extensions` in a new tab;
  - enable Developer Mode;
  - click the *Load unpacked* button and select the extension directory.
6. Pin your extension to the toolbar to quickly access your extension during development.



# EXAMPLE: Focus Mode

- Simplifying the styling of a web page by removing menus, search bars, ...
  - SOURCE:  
<https://developer.chrome.com/docs/extensions/mv3/getstarted/tut-focus-mode/>



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