





Appendix 2

Debugging & Inspecting

Shadi Lahham - Programmazione web - Frontend - Javascript











per una crescita intelligente, sostenibile ed inclusiva

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Dev tools



Dev tools



- Web authoring and debugging tools
- Built into the browser
- Provide developers deeper access into web applications



Dev tools



- Modify the DOM and CSS on the fly
- Understand and debug code
- Monitor network requests
- Simulate a mobile device viewport
- Measure performance
- A lot more ...

We will look at the Chrome Developer Tools



Try the Chrome devtools



- Open the Javascript console
 - Mac: command + option + j
 - Windows/Linux: control + shift + j
 - Windows alternative: press F12 and select the console tab

Type:

```
console.log('Testing the console');
console.error('this is an error');
```



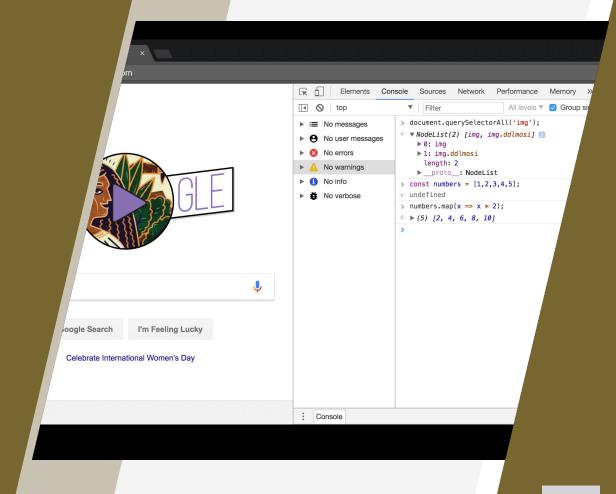
Dev toolsElements panel

View and change the DOM and CSS Edit the HTML Modify and add CSS properties

```
eloper Tools - https://developers.google.com/web/tools/chrome-devtools/
                               Sources
                                         Network
                                                   Performance
                     Console
                                                                 Memory
                                                                           Application
                                                                                       Security
                 class="chekov">
               devsite-doc-page
                devsite-header-no-lower-tabs no-touch" id="top_of_page"> == $0
           iss="devsite-wrapper" style="margin-top: 48px;">...</div>
           d="devsite-request-elapsed" data-request-elapsed="214.869976044"></span>
            src="https://clients5.google.com/pagead/drt/dn/" aria-hidden="true" style="dis
          </iframe>
          body#top_of_page.devsite-doc-page.devsite-header-no-lower-tabs.no-touch
        ent Listeners DOM Breakpoints Properties
                                    :hov .cls +
       style {
                                                                    margin
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      tml {
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 -ms-text-size-adjust: 100%;
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bb Ib vib vbc
                         deveite_google_blue css:1
```

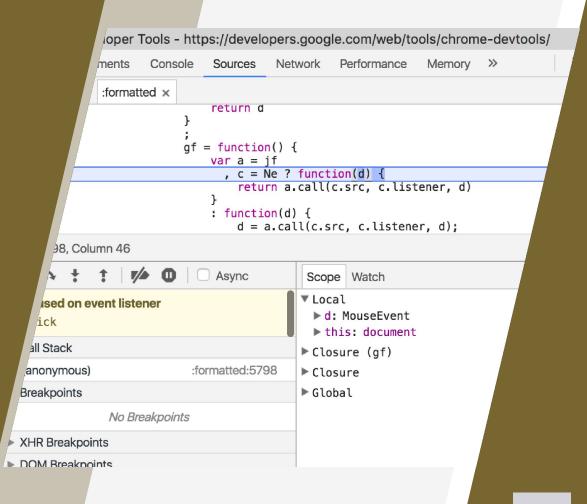
Dev toolsConsole panel

See error and warning messages View the console output Write Javascript directly



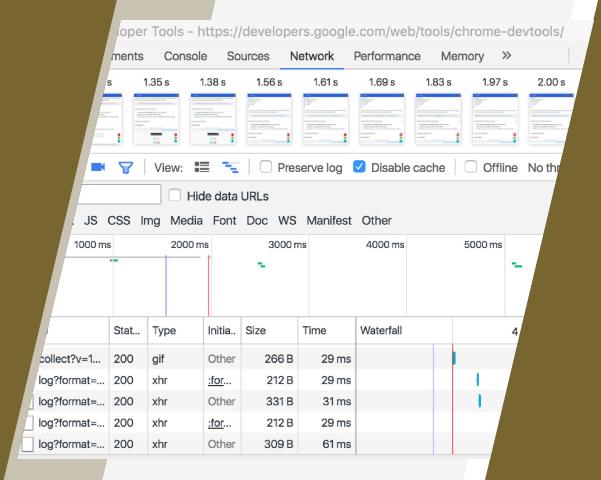
Dev toolsSources panel

Debug and edit JavaScript
Save and run snippets
Pause execution using breakpoints



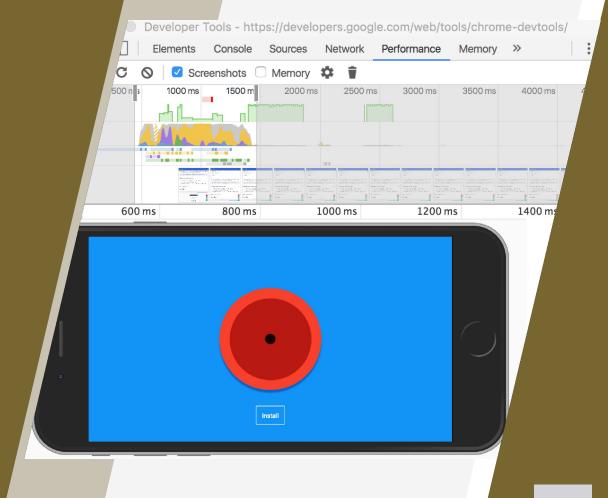
Dev toolsNetwork panel

Monitor downloaded resources Monitor HTTP requests Inspect request headers, content, etc



Dev toolsOther panels

Many tools are available Learn how to use them They are very useful



Further reading



The DOM in Chrome DevTools

Get Started With Viewing And Changing The DOM

CSS in Chrome DevTools

Get Started With Viewing And Changing CSS



Further reading



Javascript Debugging in Chrome DevTools

Get Started with Debugging JavaScript in Chrome DevTools

Console Overview | Tools for Web Developers

<u> JavaScript Debugging</u>



Further reading



Videos

Chrome Developer Tools (Devtools) Tutorial Introduction for Beginners

<u>Debugging JavaScript - Chrome DevTools 101</u>





Your turn



1.Inspect the www



- Choose one or more websites that you know
 - Choose websites that have a complex HTML structure and many Included Javascript files (in the head and body)
- Use the devtools to
 - inspect and modify the page (HTML, CSS, Javascript)
 - Check the responsiveness of the page for various mobile devices (breakpoints)
 - Console output (errors, warnings, etc)
 - Examine the Javascript code, try to stop it at different points and examine the variables
 - Check network requests and resources that are downloading
 - If the site has the possibility to upload files, also check uploading of resources



Continues on next page >>>

1.Inspect the www



- Document your findings in a markdown .md file
- The file should be well formatted, divided into sections, and contain all links and relevant references
- The file should at least contain the names of participants, your approach and findings.



2.Inspect your code



- Create an HTML page with an included Javascript file
 - The HTML page should include some content describing what you are doing
 - The Javascript file should do something useful and contain at least 3 functions and many of the language features that you have learned so far
 - The project should also include a readme.md file
- Inspect your page
 - Inspect your page with devtools
 - In particular try to use the Javascript debug tools in the 'source' panel
 - Document any findings in the readme.md file

