Team Rocket

CSCD01 Deliverable #2

March 11th, 2020

Team Members: Yasir Haque, Adnan Shahid, Patricia Lee,

Sol Han, and Jacqueline Chan

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How to build our application

Generally, just check out the repo:
https://github.com/CSCD01/gecko-dev-team09
Then follow the steps outlined in the ReadMe

Use the following link to troubleshoot any issues you may have (choose the option for your operating system)

https://developer.mozilla.org/en-US/docs/Mozilla/Developer_guide/Build_Instructions

Issues

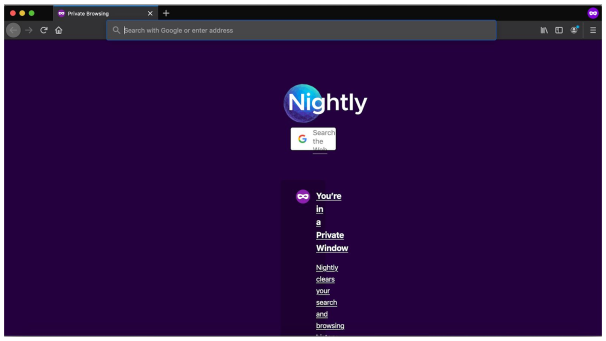
Issue #1

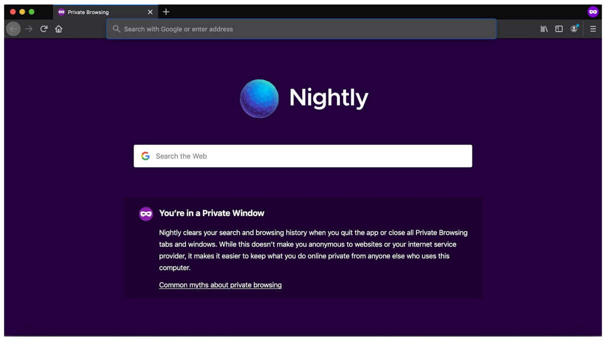
Make about:privatebrowsing an HTML page:
https://bugzilla.mozilla.org/show_bug.cgi?id=1609873

Description

The dev team wanted to change this xhtml file to an html file because it was determined to be redundant as it no longer has any dependencies (except its own build files).

Merely changing the file name and build path routers as specified in the initial bug ticket was not enough as there were certain html elements that had to be changed as well to make sure the format of the page did not break (as shown below). This is because xhtml handles self-closing tags differently for elements that contain other elements.


Private Browsing
Search with Google or enter address
Nightly
Search the Web
You're in a Private Window
Nightly clears your search and browsing



You're in a Private Window

Nightly clears your search and browsing history when you quit the app or close all Private Browsing tabs and windows. While this doesn't make you anonymous to websites or your internet service provider, it makes it easier to keep what you do online private from anyone else who uses this computer.

Common myths about private browsing

Expected Results:

- There should be no changes on the frontend visually when the file is converted from xhtml to html.

Estimated Effort

We estimate that completing this issue will take 5 hours because familiarizing ourselves with mercurial and learning how to submit patches will take time (for our first time). As well as doing multiple builds. Contacting our client/mentor to confirm user requirements and clarifying the contributing process to mozilla will also take time

Why we chose to implement this issue

- The private mode home page is a commonly used window and it would be nice to see our changes reflected there.
- We wanted to pick an issue that is relatively simple since this was our first time handling a bug on this project.
- We wanted to learn how to appropriately follow their conventions, and submit a patch.
- This is a great patch to submit in a relatively short time, in addition to two other issues we planned to address.
- It was one of the first bugs suggested by the dev team which allowed to us to stay in touch with a mentor as well if we had any questions
- If not implemented correctly, the risk would be that the bug would be the first thing users see on private mode. However, as a team we read through the issue and determined that we were confident that we were able to fix this issue.

Acceptance Testing

Test Case 1:

1. Open a new instance of the firefox browser
2. Go the menu on the top right (three lines)
3. On the dropdown click open New Private Mode
4. Check that it looks the same as production. (the image to the right above)

Test Case 2:

1. Open a new instance of the firefox browser
2. Open a private window using the short-cut key (ctrl+shift+P on windows and cmn+shift+P on Mac)
3. Check that the format of the page looks the same as production. (the image to the right above)

Code Changes

Changed files:

- browser/components/about/AboutRedirector.cpp
- browser/components/privatebrowsing/content/aboutPrivateBrowsing.html
- browser/components/privatebrowsing/content/aboutPrivateBrowsing.xhtml
  - This file was removed
- browser/components/privatebrowsing/jar.mn

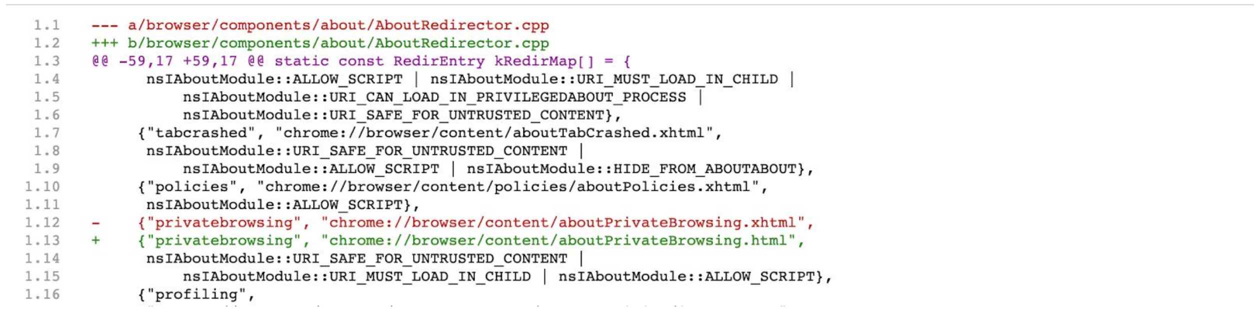
Full list of changes:

https://hg.mozilla.org/integration/autoland/rev/e01d0f2150c9

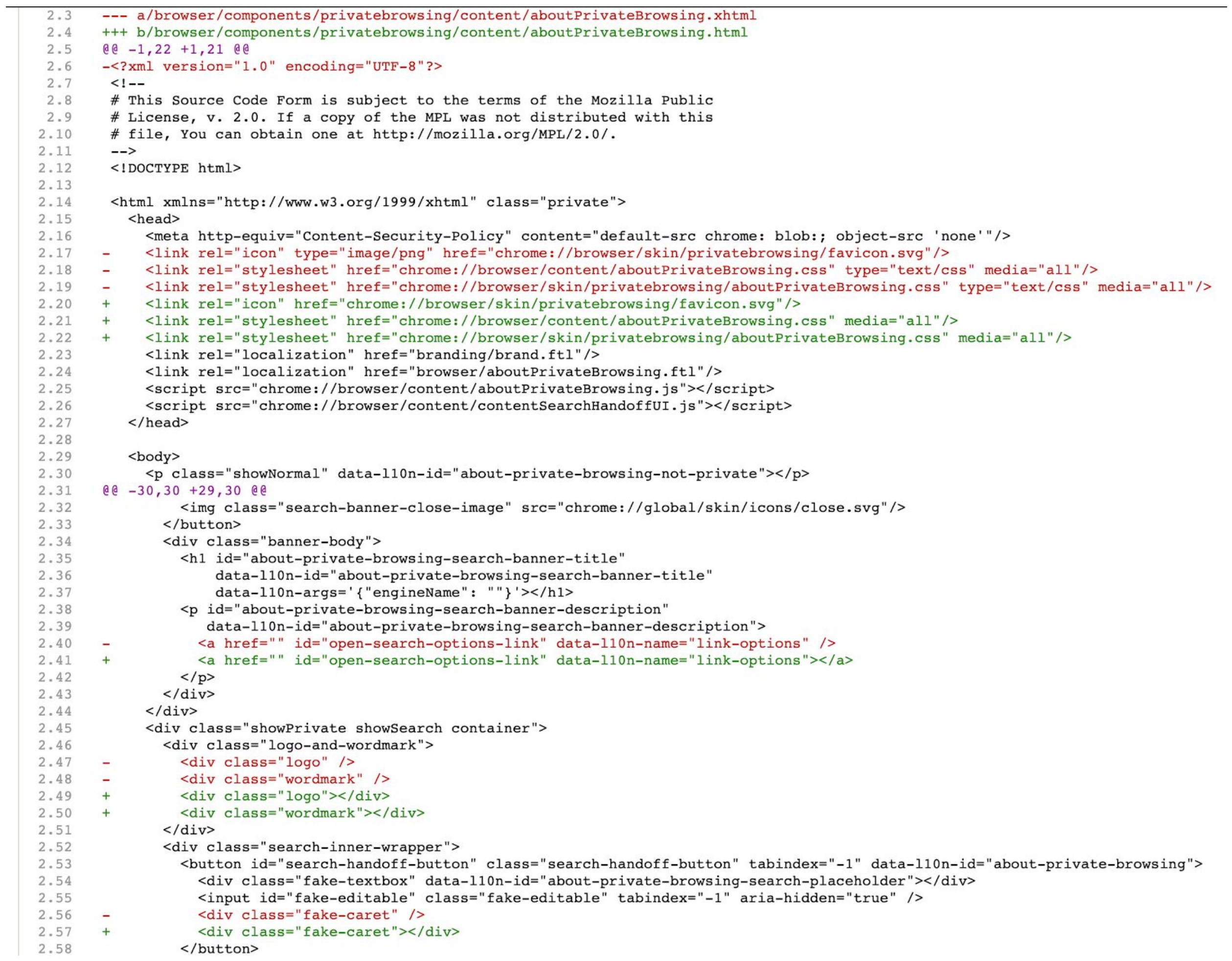
https://github.com/mozilla/gecko-dev/commit/f11a8669892d8301b7ee4728f044ec161aa100cb

For this issue, we removed the existing aboutPrivateBrowsing.xhtml file and replaced it with the aboutPrivateBrowsing.html as desired for the bug fix and formatted it appropriately (such as updating the tags). We also needed to update the AboutRedirector.cpp and jar.mn to include the name of the new html file and remove the name of the xhtml file. Because it is an isolated file change, it does not change the design of our project.

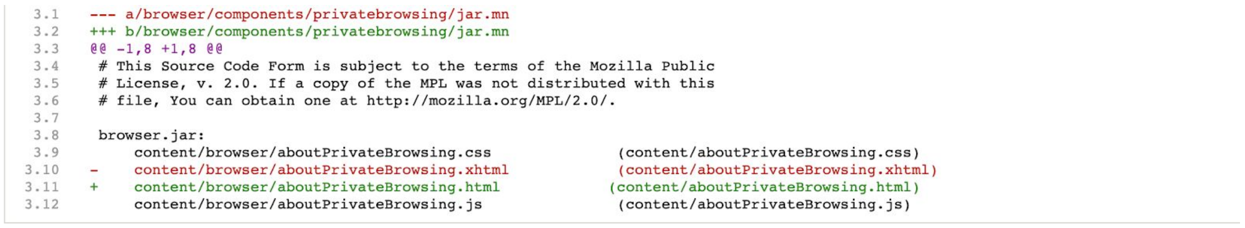
Here are essentially the diffs between each file that was modified (these diffs are also in the link above):



```
--- a/browser/components/about/AboutRedirector.cpp
+++ b/browser/components/about/AboutRedirector.cpp
@@ -59,17 +59,17 @@ static const RedirEntry kRedirMap[] = {
          nsIAboutModule::ALLOW_SCRIPT | nsIAboutModule::URI_MUST_LOAD_IN_CHILD |
              nsIAboutModule::URI_CAN_LOAD_IN_PRIVILEGEDABOUT_PROCESS |
              nsIAboutModule::URI_SAFE_FOR_UNTRUSTED_CONTENT},
         {"tabcrashed", "chrome://browser/content/aboutTabCrashed.xhtml",
          nsIAboutModule::URI_SAFE_FOR_UNTRUSTED_CONTENT |
              nsIAboutModule::ALLOW_SCRIPT | nsIAboutModule::HIDE_FROM_ABOUTABOUT},
         {"policies", "chrome://browser/content/policies/aboutPolicies.xhtml",
          nsIAboutModule::ALLOW_SCRIPT},
-        {"privatebrowsing", "chrome://browser/content/aboutPrivateBrowsing.xhtml",
+        {"privatebrowsing", "chrome://browser/content/aboutPrivateBrowsing.html",
          nsIAboutModule::URI_SAFE_FOR_UNTRUSTED_CONTENT |
              nsIAboutModule::URI_MUST_LOAD_IN_CHILD | nsIAboutModule::ALLOW_SCRIPT},
         {"profiling",
```



```
--- a/browser/components/privatebrowsing/content/aboutPrivateBrowsing.xhtml
+++ b/browser/components/privatebrowsing/content/aboutPrivateBrowsing.html
@@ -1,22 +1,21 @@
-<?xml version="1.0" encoding="UTF-8"?>
 <!--
 # This Source Code Form is subject to the terms of the Mozilla Public
 # License, v. 2.0. If a copy of the MPL was not distributed with this
 # file, You can obtain one at http://mozilla.org/MPL/2.0/.
 -->
 <!DOCTYPE html>

 <html xmlns="http://www.w3.org/1999/xhtml" class="private">
   <head>
     <meta http-equiv="Content-Security-Policy" content="default-src chrome: blob:; object-src 'none'"/>
-    <link rel="icon" type="image/png" href="chrome://browser/skin/privatebrowsing/favicon.svg"/>
-    <link rel="stylesheet" href="chrome://browser/content/aboutPrivateBrowsing.css" type="text/css" media="all"/>
-    <link rel="stylesheet" href="chrome://browser/skin/privatebrowsing/aboutPrivateBrowsing.css" type="text/css" media="all"/>
+    <link rel="icon" href="chrome://browser/skin/privatebrowsing/favicon.svg"/>
+    <link rel="stylesheet" href="chrome://browser/content/aboutPrivateBrowsing.css" media="all"/>
+    <link rel="stylesheet" href="chrome://browser/skin/privatebrowsing/aboutPrivateBrowsing.css" media="all"/>
     <link rel="localization" href="branding/brand.ftl"/>
     <link rel="localization" href="browser/aboutPrivateBrowsing.ftl"/>
     <script src="chrome://browser/content/aboutPrivateBrowsing.js"></script>
     <script src="chrome://browser/content/contentSearchHandoffUI.js"></script>
   </head>

   <body>
     <p class="showNormal" data-l10n-id="about-private-browsing-not-private"></p>
@@ -30,30 +29,30 @@
         <img class="search-banner-close-image" src="chrome://global/skin/icons/close.svg"/>
       </button>
       <div class="banner-body">
         <h1 id="about-private-browsing-search-banner-title"
             data-l10n-id="about-private-browsing-search-banner-title"
             data-l10n-args='{"engineName": ""}'></h1>
         <p id="about-private-browsing-search-banner-description"
            data-l10n-id="about-private-browsing-search-banner-description">
-          <a href="" id="open-search-options-link" data-l10n-name="link-options" />
+          <a href="" id="open-search-options-link" data-l10n-name="link-options"></a>
         </p>
       </div>
     </div>
     <div class="showPrivate showSearch container">
       <div class="logo-and-wordmark">
-        <div class="logo" />
-        <div class="wordmark" />
+        <div class="logo"></div>
+        <div class="wordmark"></div>
       </div>
       <div class="search-inner-wrapper">
         <button id="search-handoff-button" class="search-handoff-button" tabindex="-1" data-l10n-id="about-private-browsing">
           <div class="fake-textbox" data-l10n-id="about-private-browsing-search-placeholder"></div>
           <input id="fake-editable" class="fake-editable" tabindex="-1" aria-hidden="true" />
-          <div class="fake-caret" />
+          <div class="fake-caret"></div>
         </button>
```



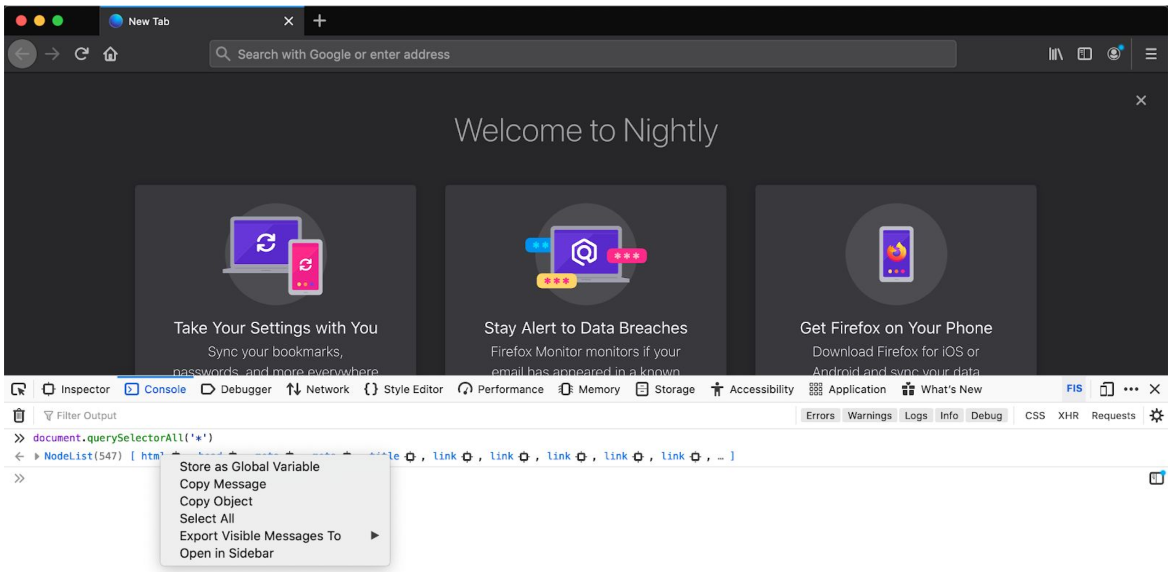
```
--- a/browser/components/privatebrowsing/jar.mn
+++ b/browser/components/privatebrowsing/jar.mn
@@ -1,8 +1,8 @@
 # This Source Code Form is subject to the terms of the Mozilla Public
 # License, v. 2.0. If a copy of the MPL was not distributed with this
 # file, You can obtain one at http://mozilla.org/MPL/2.0/.

 browser.jar:
     content/browser/aboutPrivateBrowsing.css              (content/aboutPrivateBrowsing.css)
-    content/browser/aboutPrivateBrowsing.xhtml            (content/aboutPrivateBrowsing.xhtml)
+    content/browser/aboutPrivateBrowsing.html            (content/aboutPrivateBrowsing.html)
     content/browser/aboutPrivateBrowsing.js               (content/aboutPrivateBrowsing.js)
```

Issue #2

Add "Reveal in Inspector" context menu entry on elements:
https://bugzilla.mozilla.org/show_bug.cgi?id=1612276

Description

When right clicking a DOM node in the web console, there is no option for "Reveal in Inspector". Google Chrome has this feature, so Mozilla Firefox should have a feature equivalent to it.


New Tab
Search with Google or enter address
Welcome to Nightly
Take Your Settings with You
Sync your bookmarks, passwords, and more everywhere
Stay Alert to Data Breaches
Firefox Monitor monitors if your email has appeared in a known
Get Firefox on Your Phone
Download Firefox for iOS or Android and sync your data
Inspector
Console
Debugger
Network
Style Editor
Performance
Memory
Storage
Accessibility
Application
What's New
Filter Output
Errors
Warnings
Logs
Info
Debug
CSS
XHR
Requests
Store as Global Variable
Copy Message
Copy Object
Select All
Export Visible Messages To
Open in Sidebar

```
>> document.querySelectorAll('*')
<- ▸ NodeList(547) [ html, head, meta, meta, title, link, link, link, link, link, … ]
```

Steps to reproduce:

1. On any page, right click and select "Inspect Element"
2. Run document.querySelectorAll('*')
3. In the resulting NodeList, right click any of its elements

Actual results: The context menu contains several entries, but there is no equivalent of "Reveal in Elements panel" from Google Chrome

Expected results: There should be an entry labelled “Reveal in Inspector”

Estimated Effort

We estimate this issue will take about 4 hours to complete because since the code for “opening a DOM node in the inspector” already exists, this bug should be fixed relatively easily. However, it will take some time to locate that code and understand how to use it.

Why we chose to implement this issue

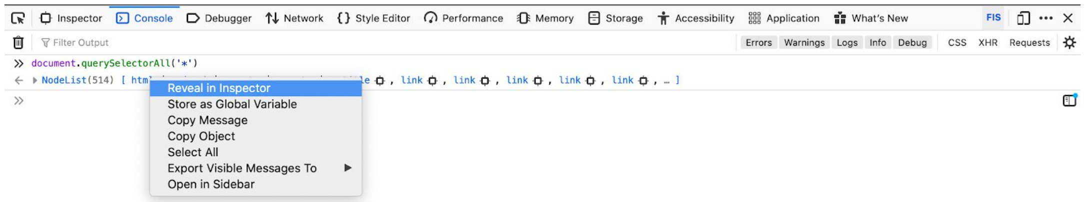
This issue seems relatively simple. The logic for “opening a DOM node in the inspector” already exists in Firefox’s code, so the biggest challenge would be locating the correct method that executes that logic and figuring out how to call it. Also since this is a frontend issue, we would only need to modify JavaScript files, which is a language that we have experience with. Overall, this issue is low risk because we can search for files we need to change using SearchFox and we have a mentor to consult.

Acceptance Testing

Test case 1:

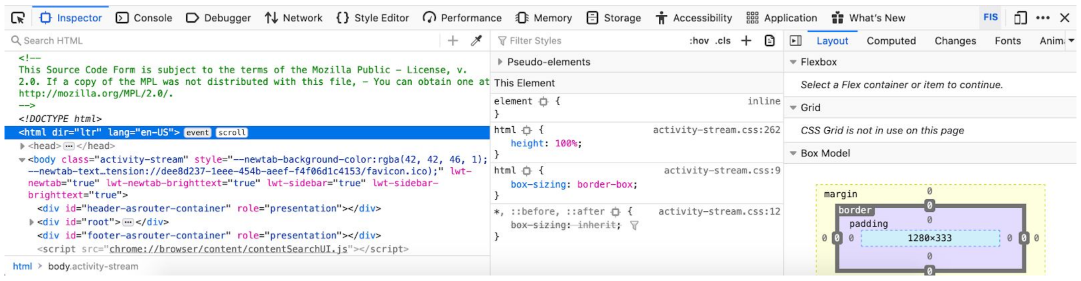
1. Open Mozilla Firefox and open the DevTools (right click > “Inspect Element”)
2. Go to the Console tab and run “document.querySelectorAll(“*”)”
3. In the resulting NodeList, right click one of its nodes

4. Within the context menu, there should be the entry “Reveal in Inspector”



```
>> document.querySelectorAll('*')
← ▸ NodeList(514) [ htm…le, link, link, link, link, link, … ]
```

5. Click on “Reveal in Inspector” (or press its access key ‘Q’) and it should bring you to the Inspector panel. Within the Inspector panel, the HTML element that corresponds to the node you right clicked should be highlighted



```
<!--
This Source Code Form is subject to the terms of the Mozilla Public - License, v.
2.0. If a copy of the MPL was not distributed with this file, - You can obtain one at
http://mozilla.org/MPL/2.0/.
-->
<!DOCTYPE html>
<html dir="ltr" lang="en-US"> event scroll
 ▸ <head> … </head>
 ▾ <body class="activity-stream" style="--newtab-background-color:rgba(42, 42, 46, 1);
   --newtab-text…tension://dee8d237-1eee-454b-aeef-f4f06d1c4153/favicon.ico);" lwt-
   newtab="true" lwt-newtab-brighttext="true" lwt-sidebar="true" lwt-sidebar-
   brighttext="true">
    <div id="header-asrouter-container" role="presentation"></div>
  ▸ <div id="root"> … </div>
    <div id="footer-asrouter-container" role="presentation"></div>
    <script src="chrome://browser/content/contentSearchUI.js"></script>
html > body.activity-stream
```

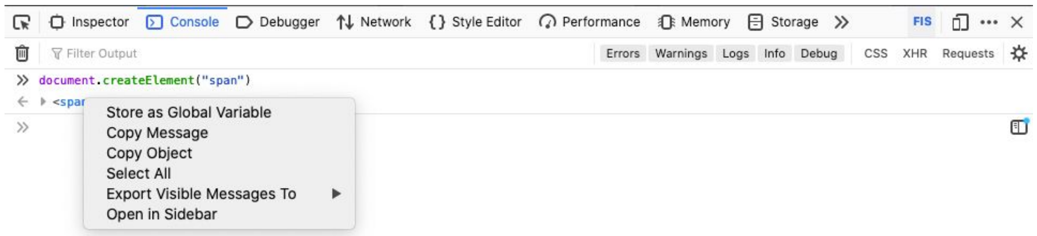
```
Pseudo-elements
This Element
element {                                   inline
}
html {                       activity-stream.css:262
  height: 100%;
}
html {                         activity-stream.css:9
  box-sizing: border-box;
}
*, ::before, ::after {        activity-stream.css:12
  box-sizing: inherit;
}
```

Select a Flex container or item to continue.

CSS Grid is not in use on this page

Test case 2:

1. Open Mozilla Firefox and open the DevTools (right click > “Inspect Element”)
2. Go to the Console tab and run “document.createElement(“span”)”
3. Right click the resulting <span>. Within the context menu, the entry “Reveal in Inspector” should not be shown because the <span> is not in the DOM



```
>> document.createElement("span")
← ▸ <spar
```

Code Changes

Changed files:

- devtools/client/locales/en-US/webconsole.properties
- devtools/client/webconsole/actions/toolbox.js
- devtools/client/webconsole/utils/context-menu.js

Full list of changes

https://phabricator.services.mozilla.com/differential/diff/242741/changesets/

https://github.com/CSCD01/gecko-dev-team09/commit/ebea7ea2abb4e75d730cf797ea061c140333056d

The overall design of the project was not affected by this change.

In context-menu.js, we added an entry to the context menu that should only be displayed when the target that was right clicked is a DOM node.

In webconsole.properties, we defined the label ("Reveal in Inspector") and access key ("Q") for the new entry in the context menu.

In actions/toolbox.js, we defined the action to be executed when the "Reveal in Inspector" entry is clicked. This new action uses the existing method openNodeInInspector.

Issue #3

devTools settings - listed items expand over the full available width: https://bugzilla.mozilla.org/show_bug.cgi?id=1531370

Description

When the cursor hovers over the devtools options in the settings menu, it incorrectly registers over the entire row. So if the blank space beside the elements were clicked, it still unchecks/checks the element. The hover is expected to register only when it is over the list elements. See this gif for clarity: https://bug1531370.bmoattachments.org/attachment.cgi?id=9047403

Steps to reproduce:

1. Launch Firefox, open devTools (press F12);
2. Open the settings menu (press F1);
3. Hover over any part of the row of a listed tool name - (the whitespace)

Expected result: Hover registered over listed elements.

Actual result: Hover registered over the whole row; which expands all the way to the next section/edge.

Estimated Effort

By reading through the issue, it appears to involve some CSS changes. These CSS changes are not as trivial as they may appear to be, since some contributors were struggling with this ticket a couple months ago. Therefore, we estimate that this would take about 2-3 hours to complete.

Why we chose to implement this issue

It is a good issue for beginners that only requires basic knowledge of html, css, and js. It also looked like an issue we could tackle within this deliverable. There is little anticipated risk, as based on our experiences, most CSS changes are low-risk.

Acceptance Testing

Test case 1:

1. Build Firefox, open devTools (press F12);
2. Open the settings menu (press F1);
3. Hover over any part of the row of a listed tool name - (the whitespace);
4. Confirm that only the list elements register the hover;
   Gif example (color coded to show html elements):
   https://gyazo.com/c57132b125c7c65d8ee3c3d9563dd17d

Code Changes

https://github.com/CSCD01/gecko-dev-team09/commit/91235325492020f63e971f46747223b404a2d584-

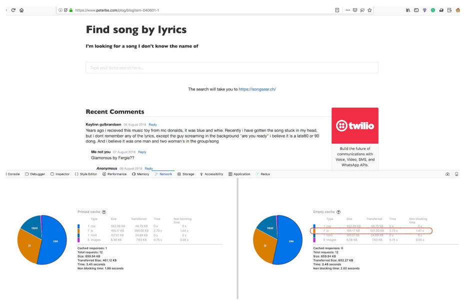
Changed files:

- devtools/client/framework/options-panel.css

Added CSS changes to correctly implement hover functionality for the panel, such as making some elements a Flexbox element.

Issue #4

Size & Transferred sizes in pie-chart mode are wrong: https://bugzilla.mozilla.org/show_bug.cgi?id=1484209



Find song by lyrics

I'm looking for a song I don't know the name of

Type your lyrics search here...

The search will take you to https://songsear.ch/

Recent Comments

Keylinn gulbrandsen 06 August 2018 Reply
Years ago i recieved this music toy from mc donalds, it was blue and whie. Recently i have gotten the song stuck in my head, but i dont remember any of the lyrics, except the guy screaming in the background "are you ready" i believe it is a late80 or 90 dong. And i believe it was one man and two woman's in the group/song

Me not you 07 August 2018 Reply
Glamorous by Fergie??

Anonymous 08 August 2018 Reply

Build the future of communications with Voice, Video, SMS, and WhatsApp APIs.

Primed cache

Type	Size	Transferred	Time	Non blocking time
1 css	352.39 KB	48.75 KB	0 s	0 s
7 js	194.17 KB	380.05 KB	2.70 s	1.44 s
1 html	107.01 KB	24.69 KB	0 s	0 s
3 images	6.38 KB	7.63 KB	0.75 s	0.55 s

Cached responses: 1
Total requests: 12
Size: 659.94 KB
Transferred Size: 461.12 KB
Time: 3.45 seconds
Non blocking time: 1.99 seconds

Empty cache

Type	Size	Transferred	Time	Non blocking time
1 css	352.39 KB	48.75 KB	0 s	0 s
7 js	194.17 KB	521.20 KB	2.73 s	1.47 s
1 html	107.01 KB	24.69 KB	0 s	0 s
3 images	6.38 KB	7.63 KB	0.75 s	0.55 s

Cached responses: 0
Total requests: 12
Size: 659.94 KB
Transferred Size: 602.27 KB
Time: 3.48 seconds
Non blocking time: 2.02 seconds

Description

Within the pie-chart view of the network tab of dev tools, the pie-chart has the JS resource size and transferred size reversed. This bug is quite obvious as the size of the files before compression is larger than after ("Size" when compared to "Transferred"). On the surface level this bug is seemingly easy to fix, however, the requests themselves for the statistics are what are failing. They fail with a status request of 304 returning a value being shown as "cached" (links to another bug posted on Bugzilla). The values themselves have some discrepancies with other tools within Mozilla, demonstrating a much larger issue at hand.

Steps to reproduce:

1. Launch Firefox, open devTools (press F12);
2. Open the network tab open pie chart view
3. Refer to the image to look at the error on the front end

Expected result: The values for Size and Transferred Size should display the correct values

Actual result: The Size and Transferred Size are swapped

Estimated Effort

To complete the surface level issue of the numbers being swapped, 2 hours. But for the deeper level issues, 8 hours. This is what is expected as the issue is over 2 years old (recently updated).

Why we did not choose to implement this issue: We did not choose Issue #4 to work on as it seemed very heavily involved after our investigation. While the front end swapping of the numbers looks seemingly easy, the underlying bug is much more convoluted. For a small deliverable, the opportunity cost is high when submitting this bug.

Issue #5

[meta] convert uses of “defer” to “new Promise”: https://bugzilla.mozilla.org/show_bug.cgi?id=1283869

Description

Several areas within devtools use defer or promise.defer to create new promises, however, within their final Promise specification, they chose to remove that method. So all locations within devtools that use that method must be converted to using “new Promise” syntax. Within this bug, smaller bugs are submitted for each directory, for example /devtools/client. The syntax followed must be changed to something similar to the following: https://groups.google.com/forum/#!msg/mozilla.dev.developer-tools/IYw2U4TCNYU/JwfhnfomAwAJ.

Estimated Effort

The change is broken to smaller changes (which are created upon request) for each directory. As it is primarily a syntax or spec change and functionality is not changed, the expected time is 3 hours.

Why we did not choose to implement this issue: We chose not to do this issue as it was similar to issue 1 and did not involve modification of real functionality. It is mostly a simplistic, low-risk change due to it being a syntax change converting defer to new Promise.

Kanban Workflow

Our workflow when implementing our three issues consisted of the team initially doing a standup to assign story points to each of these respective tasks. This process requires all members to give an initial estimate of how long they think completing a ticket might take. When revealing their estimates at the same time (to avoid unwanted biases), team members will then provide their rationale behind their decisions if they are different from one another. The group then votes again to come to a final decision to assign story points to each ticket.

These issues were broken up into two parts. A spike to investigate each respective bug and another ticket concerning the actual implementation. Investigation tickets were pulled from the “In Progress” and then pulled to the “Review” column (as there is no testing involved with these tickets) where findings were presented to the group to prevent any information silos occuring within the team.

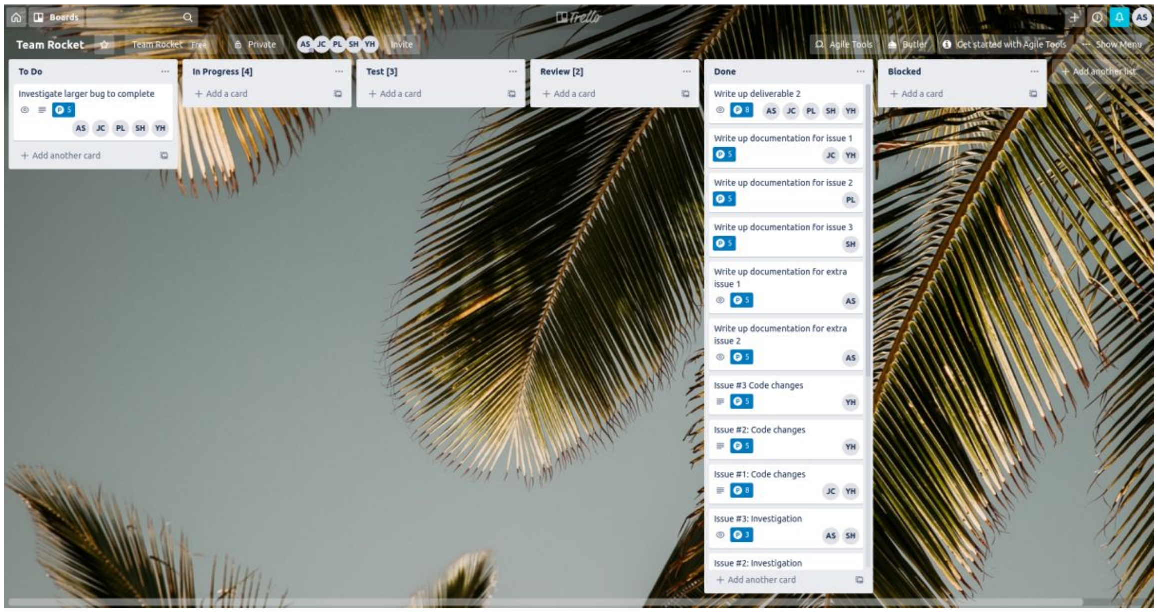
Implementation tickets were used to keep progress on actual code being made after an investigation for an issue had been finished. One or two developers would handle the “In Progress” and “Testing” phases of the task while another developer who had not worked on the ticket previously would be in charge of the “Review”. WIP limits were kept low near the review phase to make sure internal reviews were completed as fast as possible before anyone would tackle another issue or some other task so that we could potentially make patch requests to mozilla for mentors/community developers to look over our work as fast as possible.

For writing up documentation and the deliverable writeup, the story points were assigned during a quick standup and the writeup was assigned to all members.

Then pulled into the appropriate columns as they were completed and reviewed as a group following the same process as above.

The kanban workflow we used made us very productive by allowing the group to keep track of the progress made, reminding us of what needed to be completed and encouraging us to pull tasks across the board.

Below is a screenshot of our Trello board at the end of the current deliverable



To Do
- Investigate larger bug to complete — 5 — AS JC PL SH YH

In Progress [4]

Test [3]

Review [2]

Done
- Write up deliverable 2 — 8 — AS JC PL SH YH
- Write up documentation for issue 1 — 5 — JC YH
- Write up documentation for issue 2 — 5 — PL
- Write up documentation for issue 3 — 5 — SH
- Write up documentation for extra issue 1 — 5 — AS
- Write up documentation for extra issue 2 — 5 — AS
- Issue #3 Code changes — 5 — YH
- Issue #2: Code changes — 5 — YH
- Issue #1: Code changes — 8 — JC YH
- Issue #3: Investigation — 3 — AS SH
- Issue #2: Investigation

Blocked