Project Plan
Improvements to Firefox’s about:preferences
The Capstone Experience

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Functional Specifications

• Reorganization & UX Improvements
  ▪ Reorganize content to more relevant sections
  ▪ Clean up inconsistent styling within Preferences

• Keyword Search Functionality
  ▪ Filter Preferences content based on keyword search
  ▪ Hide and show relevant sections for fast and efficient preference search
Design Specifications

• Reorganization & UX Improvements
  ▪ Tab reorganization
    o Fewer categories
  ▪ Preferences Improvements

• Search Functionality
  ▪ Placed on every page
  ▪ Node traversal
  ▪ Page scraping
## Screen Mockup: Tab Reorganization (Before)

<table>
<thead>
<tr>
<th>General</th>
<th>Search</th>
<th>Content</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Startup</td>
<td>Default Search Engine</td>
<td>DRM Content</td>
<td>File Type Handler</td>
</tr>
<tr>
<td>Downloads</td>
<td>One-click Search Engine</td>
<td>Notifications</td>
<td>Link Type Handler</td>
</tr>
<tr>
<td>Tabs</td>
<td></td>
<td>Pop-ups</td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td>Privacy</td>
<td>Fonts &amp; Colors</td>
<td></td>
</tr>
<tr>
<td>Security Options</td>
<td>Use Tracking Protection</td>
<td>Languages</td>
<td></td>
</tr>
<tr>
<td>Forms &amp; Passwords</td>
<td>Private Browsing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sync</td>
<td>Sync Options</td>
<td>Advanced</td>
<td></td>
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<td></td>
<td></td>
<td>Accessibility</td>
<td></td>
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<td></td>
<td></td>
<td>Browsing &amp; Check</td>
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<td></td>
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<td>Spelling</td>
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<td>Data Choices</td>
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<td>Reports</td>
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<td>Network</td>
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<td>Connection</td>
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<tr>
<td></td>
<td></td>
<td>Cached Web Content</td>
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<td></td>
<td>Offline Web Content</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Update</td>
<td></td>
</tr>
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<td></td>
<td></td>
<td>Firefox Updates</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Automatically Update</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Certificates</td>
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<tr>
<td></td>
<td></td>
<td>Certificates</td>
<td></td>
</tr>
</tbody>
</table>
Screen Mockup: Tab Reorganization (After)

#### General
- Browser
- Startup
- Search Engines
- Tabs
- Accessibility
- Language
- Fonts & Colours
- Browsing

#### Downloads & links
- Downloads
- File Type Handler
- Link Type Handler

#### Privacy & Security
- History
- Forms & Passwords
- Private Browsing
- Tracking Protection
- Pop-ups
- Notifications
- Location bar
- Security Options
- Certificates
- DRM Content
- Connection

#### Firefox Account
- Sync Options

#### Updates
- Firefox Updates
- Automatically Update
- Reports (Data Choices)
Screen Mockup: Preferences UI/UX Improvements, Example (After)
Screen Mockup: Preferences UI/UX Improvements, Example (After)
Screen Mockup: Search Functionality

![Screen Mockup: Search Functionality](image)
Technical Specifications

• UI/UX Modification
  ▪ XUL, CSS, XHTML content modification

• Search Feature
  ▪ Page Scraping using Javascript

• Telemetry
  ▪ Collect user info through Javascript/C++ Telemetry Probes
  ▪ Learn about user behavior

• Development Tools
  ▪ Bugzilla
  ▪ Mercurial Source Control
  ▪ Firefox Developer Tool
System Architecture

The Capstone Experience

Team Mozilla Project Plan

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System Components

• Hardware Platforms
  ▪ Mac (macOS)
  ▪ PC (windows, linux)

• Software Platforms / Technologies
  ▪ Firefox, Nightly and others
  ▪ Mercurial (Code Base)
  ▪ Bugzilla
  ▪ Text editors (VS Code, Vim, Emacs, Sublime)
  ▪ IRCCloud, Fb messengers, Slack
Testing

• Unit Testing
• Manual Testing
• Firefox build in Debugger tool
• Cross platform testing
Risks

- **Firefox Code base**
  - Multiple versions of Firefox, crucial and important to edit correct components and section of code
  - Understanding bugs, Working with clients and testing code in multiple platforms

- **Ambiguous bug descriptions**
  - Unclear descriptions on what the bug is and how to fix it
  - Communication with clients, contacting reported teams

- **Code quality and process specifications**
  - Strick coding and process standards to follow
  - Following documentation, communication with clients and constant revision of code and feedback

- **Search Algorithm**
  - Finding content from about:preferences through keywords, descriptions and other identifiers
  - Working with clients, researching on HTML search methods and lastly looking at examples from of search algorithms written in Firefox
Questions?