

## Master's Thesis Specification



Student: **Matějka Jiří, Bc.**

Programme: Information Technology Field of study: Information Technology Security

Title: **GPG Encrypted Web Pages**

Category: Web

Assignment:

1. Get familiar with the GnuPG project.
2. Learn how to write WebExtensions.
3. Design an extension for the Firefox browser that allows to decrypt parts of a web page.  
Propose a suitable approach that detects encrypted objects. Propose a solution that is able to detect interactive changes to the page performed employing XHR API, Fetch API, and Push API.
4. Develop the extension with support for at least GNU/Linux.
5. Test the extension.
6. Publish the extension on addons.mozilla.org, evaluate the results and propose possible future directions for further development of the extension.

Recommended literature:

- Mueller: Security for Web Developers: Using JavaScript, HTML, and CSS. ISBN 978-1-491-92864-6, O'Reilly, 2016.
- The GNU Privacy Guard. The GnuPG Project. Available online <https://gnupg.org/>.

Requirements for the semestral defence:

- Points 1 to 3 of the specification.

Detailed formal requirements can be found at <https://www.fit.vut.cz/study/theses/>

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