# CTU CZECH TECHNICAL UNIVERSITY IN PRAGUE

# THESIS REVIEWER'S REPORT

#### I. IDENTIFICATION DATA

Thesis title: Browser Extension for Secure Web Development

Author's name: Sipek Michal

**Type of thesis:** Master

Faculty/Institute: Faculty of Electrical Engineering

**Department:** Department of Computer Science

**Thesis reviewer:** Sebastian Garcia

**Reviewer's department:** Faculty of Electrical Engineering , Department of Computer Science

#### **II. EVALUATION OF INDIVIDUAL CRITERIA**

Assignment

How demanding was the assigned project?

The project was hard since doing a pentest tool from a web browser is hard, with many problems to overcome. So far I don't know a good browser extension that can do it in a useful way.

## Fulfilment of assignment

В

How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.

The task was satisfactorily fulfilled since the implementation managed to do some parts of a pentest from the extension. So the part of the primary goal was fulfilled, and some parts of the goal were not fulfilled. The parts not fulfilled are the automation part of the tests and the awareness of the developers. This last two parts are much broader as goals and not done. First, there was no analysis of which techniques should be included and which should not. Second, the automation was not done for all the parts and finally there was no education or explanations for the user in order to raise awareness

Methodology E

Comment on the correctness of the approach and/or the solution methods.

The main problem with the thesis is its lack of a proper methodology. In particular the goal is not clear, there is no previous work analysis, no design of the experiments, no comparison, no evaluation of errors. So even though the extension is new, it is not clear if it works, and how good, and what things it does that no other extension do.

Technical level

Is the thesis technically sound? How well did the student employ expertise in the field of his/her field of study? Does the student explain clearly what he/she has done?

The code of the extension is good and the student did a good job implementing a difficult extension. Most of the hard problems of pentesting from a browser are actually how to do them in JavaScript.

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# Formal and language level, scope of thesis

C

Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?

The thesis has some English problems that sometimes makes its reading hard and sometimes even confusing. The thesis structure is not completely correct, missing the previous work section, not having comparisons with any other method, and not evaluating the browser extension in any site to see if it works correctly. The thesis can also be more extensive in the experiments and analysis.

## Selection of sources, citation correctness

Α

Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?

There are no citations problems.

#### Additional commentary and evaluation (optional)

Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.

The thesis could be much more precise and impactful. The main problem was the lack of a good methodology and structure. This lacking of research steps took out a good part of the quality. In particular the imprecise goal, the lack of methodology, the lack of comparions and lack of verifications.

# III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

Summarize your opinion on the thesis and explain your final grading. Pose questions that should be answered during the presentation and defense of the student's work.

The grade that I award for the thesis is C

Date: June 9th, 2022

Signature: Sebastian Garcia