

Application Security

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May 2018

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1 Introduction

One of the mandatory activities in Computer Science course at Erhvervsakademi Sjælland is an individual specialization project. In this project, student has to choose a subject, which was not presented during the lectures, research it and describe it in the synopsis.

I have chosen application security as the topic that I want to learn more about. Application security is an umbrella term for all of the measures that need to be taken in order to make a secure application. That means finding, fixing and preventing security vulnerabilities.

I decided to work on this subject, because in previous semesters we have learned how to make programs, services and web applications, but we did not learn how to make them safe from exploitation. It is important, since a potential attacker could use it to gain access to the system without authorization, retrieve some sensitive data, abuse or even break the system. This could lead to some serious consequences.

2 Problem definition

During my research I am going to delve deeper into the subject of application security, its meaning, principles, importance in the modern software development, as well as practical implementation. The main question which I would like to answer is:

How to make a secure application?

In order to give an answer to it, I will first need to find solutions to the following problems:

- What is application security?
- What are the most common application security flaws and attack techniques?
- How software developers can prevent them?

3 Method

The method which I am going to use in my research consists of a few activities:

- Getting general information about application security using all of the sources available on the internet, this could include reading articles, watching videos, talks, lectures and online courses
- Reading books related to the subject of application security
- Finding detailed descriptions and tutorials about specific attack techniques
- Trying to reproduce the attacks by creating vulnerable applications and exploiting them

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