

Review of Joachim Hansens Software Security Assignment 2

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1 Introduction

For the second assignment review, I was tasked with reviewing Joachim Hansens assignment. The author has written a very detailed description/story about an electronic voting system, and race condition vulnerability in said system.

2 Review

2.1 The case

The author has thought up a case involving an electronic voting system. The description of the case is written almost like a story, in a quite entertaining and hilarious way, despite the disclaimer at the top stating "*There is no sarcasm in this text*". Still, I found this further down: "*The prototype was created in the recognized development tool known as Microsoft paint. You can see this masterpiece in figure 1*".

The humor aside, the author describes the system in a detailed way, but manages to keep it understandable for less "tech-savvy" readers. Under way, he has included pseudo code examples, and use these as references in the text to show the inner mechanics of the system, as well as pointing out how and where the code is vulnerable to race conditions, and later on, how to implement countermeasures.

2.2 Countermeasures

In addition to pointing out vulnerability in the system, the author also explains how these may be exploited (like an automated attack, thus increasing

the chance of triggering and exploiting a race condition). He also explains how to solve these problems.

Multiple solutions are described, also here with example images and code, to help the reader understand the concept and the thinking of the author.

2.3 Definition of race condition

The author never actually takes time to explain what defines a race condition. However, the description of the case both proves that the author knows the definition, and also succeeds in explaining to the reader how race conditions work in a way that is understandable. Also providing an actual definition was not a requirement in the assignment description.

2.4 Sources

The author has provided six sources, all of which are books. The first is the main book for this course, the second is a work of fiction, "Animal Farm" by G. Orwell (used in a quote), the last 4 are all text on the subject. All sources are complete with author, date, and a URL.

Final verdict: **PASS**