

PRH612 Bacheloroppgave

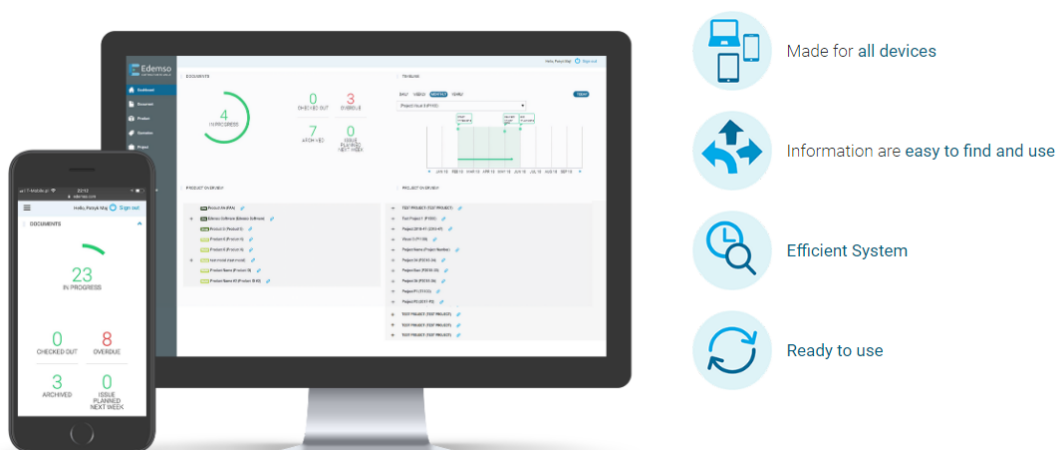
Title: Software Testing, Data Security and GDPR

Supervisor: Hans-Petter Halvorsen

Project partner: Cevia Solutions

Description:

In this project we will help Cevia Solutions to test their software (Edemso) against vulnerabilities. Edemso is a cloud-based software. The aim is to figure out the security level of the system and suggest improvements regarding data security and GDPR based on security testing of the system.



Suggested Project Activities:

- Get an overview of **Today's threats and trends** within the topics of Data Security and Software Testing. Get an overview of different platforms, operating systems, different types of applications in context of Data Security.
- Get an overview of **Software Testing** (with focus on Data Security and Security Testing), **Data Security** and **GDPR** and see how you can apply some of these techniques in context of this project
- **Test Tools:** Get an overview of relevant tools and software for testing, and especially software that can be used for Security Testing in this project.
- **Security Testing:** Testing the system properly, including **Test Planning** (create Software Test Plan, STP, create Test Cases, etc.) and documentation of the Testing and the Test Results (**Test Documentation**).

- **Penetration Testing:** Play the role of the attacker and play around the system to find security related bugs, such as hacking test from outside, from an account to another account, from a user to user etc.
- Test of **Two Factor Authentication** and other relevant authentication mechanisms.
- Test the system according to **OWASP**. The Open Web Application Security Project (OWASP) is an organization focused on improving the security of software.
- Propose recommendations for increased security and improvements in general.
- Get an overview of **ISO/IEC 27001** and see it in context of this project. ISO/IEC 27001 provides requirements for information security management system (ISMS). An ISMS is a systematic approach to managing sensitive company information so that it remains secure.
- Test connections to third party API's
- Get overview of vulnerabilities and suggest improvements regarding data security and GDPR based on the testing of the system

Background:

Poor data security costs Norwegian companies' large amounts. In addition to direct financial loss, serious security breaches could lead to lost reputation with customers and partners. security testing is very important in IT industry to protect data by all means.

Cevia Solutions (a Norwegian startup company) develops a modern and efficient cloud-based document management software for the industrial, maritime and oil and gas market.

The businesses will have proprietary and high security information uploaded to this cloud system.

There is therefore a requirement that the information is secure, and that users can log into the software securely from distant locations.

For more information regarding the system:

<http://www.ceviasolutions.com/edemso>

Signature:

Supervisor (date and signature):

Students (date and signature):