Project Description:
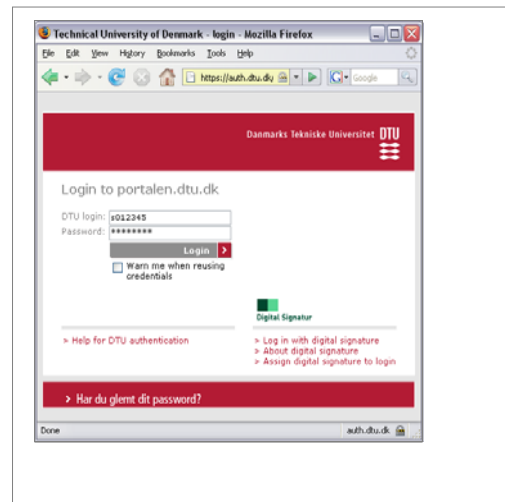
Password Store

Application Scenario

Nowadays, every active user of Internet services faces a flood of log-in names, passwords, and PIN numbers. Social networks, discussion fora, online vendors, subscription services, employers, educational resources, banks, and many others require the user to log in before useful information can be accessed. A person who follows the rules and chooses a new log-in and password for each service is thus soon unable to memorise them all.

One possible solution to the problem is an online password store. Using just one single log-in, the user can access whatever credential he or she needs. The start-up company *Stensikker A/S* wishes to run such a service and wants you to develop a suitable solution that can be used by every user in Denmark.

Project Definition

Design, evaluate and document a password store solution that addresses the issues presented by the scenario outlined above. Issues that *must* be addressed are:

- Risk analysis: What assets are at stake for different users of the service? In particular, consider the most valuable information that could be stored by the service, and what consequences the leakage or loss of this information would have.
- Threat model: What assumptions do you make about the attacker, and what threats is your system supposed to protect against? In particular, you are expected to address the issue of a malicious server, i.e., your solution should still be secure if *Stensikker A/S* turns evil and tries to access the customer data itself.
- Usability: If the system is hard to use, it will not become popular. Thus, it is important that you find a solution that the average Internet user will not find too difficult.
- Security: Make sure that your system protects against the security issues raised in the threat model, and clearly document the threats that you do not protect against.