The German University in Cairo
Dpt. for Media Engineering and Technology
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Project 1

Auction site

Submission: Friday, May 9th, 2013 at 11:58 pm

Exercise 1–1 (100 Marks)

You are building an auction website, you do not really trust the database administrator and you do not want him to see your users' passwords, lest they use them for their other accounts.

Users should be given an easy yet secure way to reset their passwords.

Encrypt the credit card details that the users enter, such that only you would be able to decrypt them.

Handle Cross-Site Scripting (XSS) and SQL-injection in all the forms on your website.

You need to cover some basic features in your website: users should be able to register, log in, and save their credit card details.

Here's a list of the required security features

(a) Salt-hash the passwords. (10 Marks)

(b) Implement a secure way to reset the user's passwords, that changes every time the user requests to reset it. (10 Marks)

(c) Encrypt the credit card details of the users. You need to decrypt them again from the admin interface (assume the admin memorized his key). (40 Marks)

(d) Secure your website against SQL injection and XSS (cross-site scripting). (40 Marks)

Notes

- Please complete the project in a team of up to 8 members.
- You will be presenting your website and showing us how you handled the above security features. If the technology you used automatically handles any of them, you need to understand how it is handed in the background and be able to explain/disable it (therefore, I would suggest using open-source software).
- You need to understand how the encryption works, and be able to explain it.
- Presentations will be on the 11th of May. An email will be sent with the exact timings beforehand.