

Scripting Formative Coursework

Coursework Scenario

An organisation has contracted you to create a prototype for a new web application. The web site driven by the web application is designed to attract collectors of historically significant cryptographic (crypto) devices, so that they can share information with fellow collectors. Registered users will be able to create records of their cryptographic devices and interact with records belonging to other registered users.

Analysts have carried out a preliminary design of the database and provided scripts to create and populate tables with test data. A framework which includes UC11 has been provided. After an initial requirements meeting between you and the organisation, the following use cases were identified:

Use cases for Anonymous User:

- UC01 – A new user may register with the web application.
- UC02 – A registered user may login.

Use cases for Logged in User:

- UC10 – Secure Logout.
- UC11 – Show a list of all crypto devices in a drop-down list which can then be selected to view a detailed record.
- UC12 – A user can create records for up to ten crypto-machine. Creating a record should include input of relevant crypto device data (e.g. Device Name, Model, Description, Country of Origin, etc).
- UC13 – A user can edit or delete their records.
- UC14 – Users can choose whether a given record is 'registered' or 'private'.
 - *registered* means that any registered user can view the record
 - *private* means that only the owner of the crypto device can view the record
- UC15 - Improve UC11 to only show records that are 'Registered' and do not show devices that are 'Private'.
- UC16 – Improve UC12 to allow the upload of one image file for each crypto device which is less than 1MB in file size.

The organisation is aware that web applications can sometimes contain security vulnerabilities which can result in data loss and embarrassing headlines in the media. They have asked you to minimise the possibility of such eventualities.

The organisation mentioned that an independent web application penetration tester may audit the web application for vulnerabilities.

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Coursework Notes

You may use PHP scripts supplied in the laboratory sessions as a starting point for your application.

- This a piece of formative coursework. That means it is not submitted for assessment, but you may ask for feedback during laboratory sessions.
 - However, there will be questions written in the final module examination based upon your presumed learning from this work.
- Your completed application will show evidence of understanding of the object oriented paradigm, single point of access, Agile methodologies, the MVC pattern and common web application security issues, including sanitisation and validation.
- You should attempt this work in pairs.
- You must adequately document your code using page-level and class attribute DocBlocks.