CSE 3101: Internet Computing II

Lab Session 1

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Semester 1, Week 5 (24th & 25th September, 2018)

1. Aims

1.1. Improved understanding of client-side Web Forms and the server-side PHP language.

1.2. Increased facility with the initial set of concepts & techniques needed for eventual completion of Assignment 1 (due 12th October). **{Note that some topics might not have been covered yet in lectures; those related tasks could be skipped below.}**

2. Tasks

2.1. Peliminaries

2.1.1. Become familar with any suitable HTML & PHP editor, such as NetBeans, to allow creating client-side web forms along with server-side processing pages. (Both the client- and server-side functionality can be run on the same PC.) {Note that for NetBeans, the supporting 'PHP' plug-in may need to be installed.}

2.1.2. Become familar with any suitable web server, such as Apache, to allow processing-pages/-handlers to receive data & requests submitted via the client-side web forms described below.

2.1.3. Become familar with any suitable Database Management system, to allow creating a local database that will store both User Account credentials (user name and encrypted password), and contact / address-book information for Persons as follows:

- 2.1.3.1. First name
- 2.1.3.2. Middle name (optional - multiple middle names)
- 2.1.3.3. Last name
- 2.1.3.4. Nickname
- 2.1.3.5. Multiple telephone numbers (e.g.: home, work, mobile, etc.)
- 2.1.3.6. Address
- 2.1.3.7. Birthday
- 2.1.3.8. Memo section
- 2.1.3.9. *{Additional attributes can be added at your discretion.}*

2.1.4. Note that some other fields will likely be needed to associate the User Accounts with appropriate subsets of the Persons' records (e.g., via internal ID nos.), to facilitate access control.

2.2. Web Forms {Client-Side; HTML; HTTP Request ('GET', 'POST')}

2.2.1. Practice creating a simple Cookie Test web form, to allow receiving a cookie from the server side upon submission, and optionally re-sending a received cookie back to the server side (via 'Cookie: …=…; …' in the request header).

2.2.2. Practice creating a Contacts web form, to allow data-entry of record-information per person as shown above, and submitting that data to the server side (via the '<form>' tag with optional 'action=…' attribute, and contained '<input>' tags, etc.)

2.2.3. Practice creating a Query web form (in HTML), to allow requesting & receiving lists of those records from the server side (via the usual '<form>' tag, etc.) and then displaying the results on the client side, depending on various search criteria — e.g.: *all* records; those where a phone no. begins with "222"; those where the last name starts with "Abc"; etc.

2.3. Processing Pages / Handlers {Server-Side; PHP; HTTP Response}

2.3.1. Practice creating processing pages, to respectively receive data from the above web forms upon submission.

2.3.1.1. For cookie-sending, the suitable cookie(s) should be returned via 'Set-Cookie: … =…' in the HTTP response header. For cookie-receiving, the request header submitted by the client should be parsed to extract any cookie data.

2.3.1.2. For record-creation, the data should be used to store a new record in the database.

2.3.1.3. For record-querying, the data should be used to search the database for any matching records to be returned to the client side.

2.4. Overall Considerations

2.4.1. Do strive to separate functionality as much as possible into multiple files, and *include* them as necessary. For additional practice, you could also follow any of various useful tutorials available online.