CMP306 Dynamic Web Development 2

Tutorial 2 – Database Design

In the lecture you were presented with a discussion and a very quick overview of normalisation. It is assumed that you have learnt this previously. If not, then it is important you learn from the examples below. Please make notes on these 3 examples as you go along.

Look at :

1. <http://www.studytonight.com/dbms/database-normalization> In the lecture we went through this example taken from the Internet. If you did not follow this or are new to Normalisation read through this again. Read the final section on BCNF. See what I mean by this being artificial!!
2. <http://www.sqa.org.uk/e-learning/MDBS01CD/page_01.htm> The SQA have produced a good overview of the normalization process. It is worth running through this resource.
3. <http://beginnersbook.com/2015/05/normalization-in-dbms/> A third and final example of the normalization process.

Last week you created a simple database table with 12 items (films or people or cars etc) each with a title, image and description. What you need to do today is to add more images and add articles.

**Images:** Rather than a single image per item you need the ability to hold more than one image for an item. Note that images have titles associated with them.

**Articles:** Articles can be added to the item(s). An article will have a title, author, text, image(s), video. N item may have 0 , 1 or more articles. An article may link to 1 or more items.

The task in this tutorial is to create a database design for this data.

* Take the basic table from last week and allow more than one image for an item – another table(s) will be needed
* Add an article table
* Link the items to the articles in a table. What about the images in the article?

**Users:** Users can register for your site and login to allow them to comment on an article.

**Comment:** A logged in user can comment on an article. You need to hold the comment the user who commented and the article it relates to.

1. Draw an Entity / Relationship diagram to show this data
2. Develop a set of suitable relations for the implementation of:
   1. The items
   2. The images
   3. The articles about these items
   4. The users of your site
   5. The comments on the articles by the users
3. For each attribute in your relations define the format; how long the field will be and what format the data is.

This Database design will be used throughout the module.

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