The Project

CSCI 321

Fall 2012

Goals

- Start-to-finish design and implementation effort.
- Pick your own application domain which requires *nontrivial* use of a database. Build the complete application:
  - Design of the database.
  - Define and design the features and functions provided by the application.
  - Fully implement the application:
    - May or may not not involve a web interface.
    - May or may not involve a graphical interface.
    - Database must be populated with sufficient data to demonstrate the utility of your application for “big systems.”
    - Will use the `postgresql` installation on `bg6.cs.wm.edu` (but feel free to install and administer `postgresql` on your own system if it eases development pain (`bg6` is where your DB will ultimately be tested).

Groups

- Will work in groups of three (one group of two allowed).
- There will be 7 groups of three and one group of two.
- Fundamental group rules:
  - All group members get the same grades on all submitted work related to the project.
  - Must work out difficulties internally. I will serve as an arbitrator in only the most extreme cases.
- PROJECT ASSIGNMENT 0: form groups and have one member of each group send me email informing me of the names and CS userids of the group members. Do this by **NOVEMBER 2**. Also send me a single URL which will serve as the root of the web hierarchy of the documentation for your project.

Groups - Continued

- Put the following in a file named `.htaccess` at the root directory of the hierarchy (the one accessed by the URL):

```
deny from all
allow from 128.239
```

- This will prohibit access from outside of W&M (you can add other IPs to the allow from line to permit remote access if you live off campus).
- If you want to allow passworded access from anywhere, send me email and I'll tell you what to do.

Stage 1

- Submit (by posting at/beneath your URL) a short paper that describes:
  - A description of the application domain. Be as specific as possible about what you intend to do.
  - A description of the functions that you intend to offer. Try hard to come up with at least one creative/original function (make sure the creative/original functions are clearly highlighted in the paper).
- See next slide for an example.
- This should be submitted no later than **November 6**. (By "submitted," I mean having a PDF posted beneath your project URL and email sent to me.)

Stage 1 Sample Description

Our domain of the choice is the movie domain. In this domain, we will be modeling the following entities: movies, their actors, directors, genres, theatres, showtime, and reviews. We plan to populate our application by crawing the real-world sources such as Yahoo Movies. We will support the following functionalities:

* finding movies by title, actors, directors, and genres
* finding movies by showtime or location
* retrieving and updating critics and user reviews

As an extra feature, we plan to support movie recommendation: Based on the user reviews, we will cluster users into the peer groups of people sharing similar taste. Each user will then be recommended to the movies evaluated highly by her peer group.

Stage 2

- By **November 20**, post a detailed E/R diagram of your application domain. Associate with the diagram any annotation you feel helps me understand your domain and the assumptions you make.
- Also post the complete relational schema of your database. Include all keys, as appropriate. Your schemas should all be appropriately normalized.
- Describe the programming environment(s) you intend to use.
- Describe, in detail, how you will get data with which to populate your database.

Stage 3

- Submit a PDF that shows your (roughly) functional application. Demonstrate how a user can query, insert, and modify the database.
- This should be in place no later than **November 27**.

Stage 4

- In-class demos will be done on **December 4 and 6**.
- Each group will have 20 minutes to dazzle the class with their application in action. Not all group members are required to be involved with the class presentation.
- Also, by **December 7**, submit a final write-up of your project. Incorporate all design and implementation details. Also provide detailed instructions concerning how a user (me, in this case) would operate in your application. Also be sure to point out any particularly laudable aspects of your project. This write-up should be in the form of a PDF posted beneath the project URL.
- You must also provide a tarball with your source and makefiles that allow building your application from source.
- If you need to borrow a laptop for your demo, let me know.