CS 411 Final Project

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| ***Captain*** | Jason Neal |
| ***Project Title*** | CareerXplorer |
| ***Project Summary*** | Using a datasets from bls.gov containing occupation statistics from 2014 to 2016. Our database application will provide statistics on different occupations, comparing them together, or year over year to help people decide on an occupation that could meet their needs. |
| ***Project Description*** | * **Description of an application of your choice.** It’s hard to decide on an occupation. By providing statistics and allowing easy comparison of occupations, we want to help people in deciding their future job. * **Usefulness.** There are similar websites out there but they don’t provide year over year statistics for how an industry might be progressing. It’s hard to find visualizations, let alone ones that easy portray the information. Our web application will tackle all these issue with existing websites. * **Dataset.** We will be using the dataset present [here](https://www.bls.gov/oes/#databases). This government website provides yearly statistics for different occupations which will be combine to create visualization for industry growth and so on. * **Description of the functionality that you plan to offer.** This web application will provide a way for people to search for their future occupation.   + **Basic Functions**:     - User can add their occupation information     - User can update their occupation information     - User can delete their occupation information     - User can search different occupation information   + **Advanced Functions:**     - Visualization of data to show occupation job profiles     - Visualization of data to compare different job profiles * Advanced Techniques.   + Indexing   + Transaction   + Partitioning\Sharding   + Stored procedure   + Prepared Statements   + Compound Statements   + Constraint   + View |
| ***ER Design*** | * Have the ER diagram for your application, plus descriptions in plain words on the assumptions you make. For example, "we think that there must be only 1 adviser for each student". |
| ***Development Plan*** | * The relational schema of your database. Remember to include all keys and dependencies (e.g., functional dependencies) as appropriate. * Describe the final choice of databases and software platforms/languages that you will be using. Check the guidelines under Tools and Resources to see what tools can be used. * Describe where and how you will get data for your application. Do you get it from the Web, some other application, or do you make it up. * Describe the labor division among group members. * A project timeline with milestones. |
| ***System Demo UR***L | Insert the link to the system page. |
| ***Initial Demo Video*** | Insert the link to the initial demo video here  **Initial Demo Video Requirement:** each group needs to demonstrate all of the following using web page or mobile app interface connected with SQL queries. We won't accept the basic queries directly written in cPanel/SQL editor at the demo time.   * Have all the data you need in your database and it should be enough to demo the basic functionality (other requirements for this stage). * Functionality:   + Show how to insert records to the database   + Show at least one query that searches the database and list or print the returned records   + Show how to update records   + Show how to delete records * **NOTE:** This should not be your page login information (insert username/delete etc). We want to see some actual records from your project updates, else you will get no credits. * Talk about your plan for the next stage of the project, including what advanced functions do you plan to support. Having clear idea about advanced functions is very important. Please, make sure you can articulate the challenge clearly.   The initial demo video should be uploaded to MediaSpace at [https://mediaspace.illinois.edu](https://mediaspace.illinois.edu/) by the team captain.  The team captain will need to log in (with your NetID and AD password). Select “Add New” and then “Media Upload” (at the top corner of the page). The team captain will be asked to fill in a form describing the uploaded video. Make sure to:   1. Name the initial demo video as “Project TeamName Initial Demo” 2. Use the tag “CS411-SPRING-2018” 3. Add all group member names to the “team members” field (using “Add” to expand the form for additional members). 4. Check “unlisted” as the type of upload at the bottom (which would allow others to see your video). 5. After uploading, the initial demo video should appear under “My Media”. Make sure to test it. 6. If the team is satisfied, click “Share” beneath the video-playing frame. This gives a shareable link to the initial demo video. |
| ***Project Files*** | Link to all the project files here  Pack all your project files in a zip archive, upload the archive to one of the file hosting services (e.g. Dropbox, Box, Github), and add the link to the archive to your project page. All project teams are also required to share the repository with All TAs. |
| ***Final Demo Video Link*** | Link to the final demo video  Final Demo Video Requirements:   * Introduce your group's project and walk your audience through its goals and features. (We don't expect a professional movie from you, just record a quick screencast with your narration) * Basic Functions:   + Show how to insert/update/delete records to the database (repeat from the Initial Demo)   + Show how to search the database and list or print returned results. You need to show a few different interesting queries over your database. **One of the queries must involve join of multiple (at least 2) tables**. * **Demo Two Advanced Functions**: Give a brief overview of your advanced functions and their link with your project. **You have to be able to clearly define the technical challenge in advanced functions and articulate it during the presentation**. * Explain the **Advanced Techniques** used in the project: Use 5 or more advanced techniques from this list   + Indexing   + Parallel query execution   + Transaction   + Approximate query processing   + Triggers   + Partitioning\Sharding   + Stored procedure   + Prepared Statements   + Compound Statements   + Constraint   + View   The final demo video should be uploaded to MediaSpace at [https://mediaspace.illinois.edu](https://mediaspace.illinois.edu/) by the team captain.  The team captain will need to log in (with your NetID and AD password). Select “Add New” and then “Media Upload” (at the top corner of the page). The team captain will be asked to fill in a form describing the uploaded video. Make sure to:   1. Name the final demo video as “Project TeamName Final Demo” 2. Use the tag “CS411-SPRING-2018” 3. Add all group member names to the “team members” field (using “Add” to expand the form for additional members). 4. Check “unlisted” as the type of upload at the bottom (which would allow others to see your video). 5. After uploading, the final demo video should appear under “My Media”. Make sure to test it. 6. If the team is satisfied, click “Share” beneath the video-playing frame. This gives a shareable link to the final demo video. |