Phase VI – DEMO

The goal of this phase is to demo the queries that you have developed during phase 5. Here you have the opportunity to show your understanding of the overall database schema (ERD), the implementation of that schema (as a relational DB) and your knowledge of SQL language (as it relates to the Queries performed in previous phase). Also, you will be able to ask questions that you may have and discuss the additional features that you might have implemented.

During the demo, I will be running your queries on my database. I may also ask you some questions about the queries or ask you to modify them slightly to better observe your understanding of the schema, the database, and/or the SQL language. The basic structure of the session will be as followed:

- Review of your project binder (Decomposition Diagram, ERD, Relational Schema, DDL, DML)
- General presentation of the material (Logical? Clear? Easy to follow? Annotation when necessary?)
- Understanding of the query and your ability to modify it.
- Demonstrated effort to audit the query
- List of Queries Implemented: (Query Description, Query Result, Explanations/Audit, etc.)
# Evaluation Rubric (phase 5 & 6) Final Project and Demo

<table>
<thead>
<tr>
<th>Query #</th>
<th>Binder and General Presentation of the material (10%)</th>
<th>Demonstrated Accuracy of the Query (60%)</th>
<th>Understanding of the query and ability to modify (20%)</th>
<th>Efforts to Audit the Query (additional records, etc.) (10%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Logical?</td>
<td>Correct Query?</td>
<td>Knows how to approach the problem</td>
<td>There is evidence of attempt to audit the query.</td>
</tr>
<tr>
<td></td>
<td>Clear?</td>
<td>Missing information/table/fields, etc.</td>
<td>Able to modify the query correctly</td>
<td>Some attempt was made, but not adequate.</td>
</tr>
<tr>
<td></td>
<td>Easy to follow?</td>
<td>Too much information (spurious results?)</td>
<td>Has issues identifying the elements or implement the changes necessary to change/fix the query.</td>
<td>There is no evidence of attempting the query.</td>
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<tr>
<td></td>
<td>Annotation when necessary?</td>
<td>Ability to modify the query?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Name:  
Date:  
Time:  
Points:  
phase V (100)  
Phase VI (50)
Queries

Q1) **Show the set of known projects for the CSCI organization that occur once per semester (more precisely: those have a recurring frequency of "Single Occurrence Per Semester").** Display the Organization ID, name, the administrator’s ID, the project's Title, Description, and Priority ID. Also, to make sure you have the right records make sure you display the field that show the recurring frequency (not just ID’s).

Q4) **What resources are needed for project named 'CS Search and Screen'?** Display the ProjectID, project title, PMID, TaskID, Title, Description, and the ResourceID, Name, and Description.

Q5) **What are project deliverables for projects that are managed by Project Manager with the last name of ‘Hakimzadeh’?** List the project manager's ID, Name, ProjectID and title, as well as the project deliverable title, description and the **due-date status** for each deliverable. Make sure there are at least 3 records in the output.

Q6) **List of employees (last name, first name, email), who have a 'Database Design - Level 2' as well as 'Web Design' skills.** Show their skills. (Ensure there are at least one employee)

Q7) **Who oversees the project titled "2018 Renovations"?** (the administrative staff for the project, including the owner, PM, task leaders). List their UserID, OrgId, Last name, first name, Phone, Email, and their Role (Admin, PM, Task Leader). Note that there is no "specific” field in the database which talks about peoples “roles”. This information must be implicitly derived from your queries (and where you obtain the data for each group of employees). This is not very difficult. (HINT: Try the following SQL statement:

```
SELECT *, "Team Memeber" as Role
FROM employee
```

Q9) **What is the availability schedule (when they are Definitely Available) for employees who work for project 'PTR for faculty XXX'?** List the last name, first name, of the employee, project name (title, etc) and the availability schedule (days, start and end time) Make sure there are at least 3 records displayed.

Q10) **Which projects cross organizational boundaries?** (projects that have multiple owners from different organizations, or have team-members belonging to multiple organizations)

Q11) **Which employees are currently “not” assigned to a project?** List the employeeID, Last Name, First Name, Job Title, Organization Name. HINT: Look up the ISNULL() function in mySQL

Q12) **List the projects, their tasks, and the resources needed for each task.** Show the project ID, title, description, as well as the task id and name and description, followed by the task leader’s id and name, finally include the resource id, name and description.

Q13) **Which Projects require external contractors?** (show the projects, their requisitions, quotes, contracts, and the company name and rep name of the contractor)

Q18) **Which organizations have the largest number of projects with “High Priority” priority?** Display the OrgID, Name, and the number of “High Priority” projects. Show the following 3 columns: OrgID, name, and the number of (count of) high priority projects they have in the system.

Q19) **Display the checklist for the "CS Search and Screen" Project?** Show the ProjectID, name, description, sequence number (Ordering which should be followed), and checklist title and description. In addition, display the name and email of the project manager and the project owner. Make sure the checklist is sorted on the proper order.
Q30) **What resources are needed for any high priority projects?** Show the Project ID, priority, title, description, deadline, as well task title, description, deadline, task Leader's ID, last name and email, followed by the resource name, description and resource type name.

Q31) **What needed skills are “missing” for completing the project “Online Informatics Degree Proposal”.** (hint: think task and the skill they need, then think project workgroups and the skills those employees have! Then think LEFT JOIN). The result of the query should simply display the Skills Needed, and the `Skills Possessed`

Q32) **Show all Project Managers (name and email) and their “High Priority” projects (id, title, and due date) that have either past their due date, or they are within 30 days of their due date.** (make sure there is sufficient data in the database to return at least one project in each category.

Q40) **Your own query that uses more than 4 tables (one of which you have not used in any other query) and requires sorting and aggregating.** Provide a description of what you are trying to do, then show the query, and its results.

Q41) **Research Temporary tables in MySQL**. Describe your understanding of Temporary tables in MySQL and then use one of the above queries to create a temporary table. Display the schema of the temporary table, then display the data in that table.

Q42) **Research Views in MySQL.** Describe the purpose and your understanding of Views and how they are different than tables in MySQL and then use one of the above queries to create a view (give a name to the view such as View12, which means the view that captures query 12. Display the schema of the view, then display the data in that view. Now change one of the base tables associated with the View and reprint the data in the view to see if the change in the base table is reflected in the view.
## Appendix – A

### Presentation / Demo Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Thursday 19</th>
<th>Monday 23</th>
<th>Tuesday 24</th>
<th>Wednesday 25</th>
<th>Thursday 26</th>
</tr>
</thead>
<tbody>
<tr>
<td>8am</td>
<td>Michael Barney</td>
<td></td>
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<td>X</td>
</tr>
<tr>
<td>9am</td>
<td>Sean Zimmerle</td>
<td>Akiva Abraham</td>
<td>Zachary Richardson</td>
<td>X</td>
<td>Pedro Garcia</td>
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<tr>
<td>10am</td>
<td>Jim Bulger</td>
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<td>Joe Carter</td>
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<tr>
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<td>X</td>
<td>Brian Carlson</td>
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<td>X</td>
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<td>Shawn Whitfield</td>
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<tr>
<td>3</td>
<td>X</td>
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<td>Christian Sassano</td>
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<td>Howard Meck</td>
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<td>4</td>
<td>X</td>
<td>Derrik Campau</td>
<td>Joseph Kotva</td>
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