CSci 5708 Homework 0 Summary

There are 32 students in class.
- 20/32 are majoring in Computer Science;
- 4/32 are majoring in Data Science;
- Others are majoring in Mathematics, Electrical Engineering, Industrial and System Engineering, and non degree.
- 16/32 are senior undergraduate students;
- 6/32 are PhD students;
- 6/32 are master’s students.

In previous courses, 26 students have worked in teams on homework, 24 have taken courses with relative grading.

Q8. Which of the following prerequisites have you taken?

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algorithms and Data Structures</td>
<td>86%</td>
</tr>
<tr>
<td>Discrete Math</td>
<td>80%</td>
</tr>
<tr>
<td>CSci 5707</td>
<td>23%</td>
</tr>
<tr>
<td>CSci 4707</td>
<td>69%</td>
</tr>
</tbody>
</table>

Q9. Which programming languages are you familiar with (choose all that apply)?

<table>
<thead>
<tr>
<th>Programming Language</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQL</td>
<td>91%</td>
</tr>
<tr>
<td>Java</td>
<td>85%</td>
</tr>
<tr>
<td>C++</td>
<td>17%</td>
</tr>
<tr>
<td>Other</td>
<td>Python, R, ...</td>
</tr>
</tbody>
</table>

Q10. 97% students have experience with DBMS to some extent.

Q12. The proposed schedule has an empty slot in the week 16. Please choose the one the following topics that you would like to be covered.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Big data</td>
<td>57%</td>
</tr>
<tr>
<td>Databases for cloud computing</td>
<td>34%</td>
</tr>
<tr>
<td>Databases for solid state devices</td>
<td>9%</td>
</tr>
<tr>
<td>Spatial databases</td>
<td>0%</td>
</tr>
<tr>
<td>Spatial data mining</td>
<td>0%</td>
</tr>
</tbody>
</table>
Q13. Please compare and contrast the following pairs (each in no more than 3 sentences).

<table>
<thead>
<tr>
<th>Question</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Logical data model vs. Physical data model.</td>
<td>67%</td>
</tr>
<tr>
<td>2. B tree index vs. Binary search tree data structure.</td>
<td>55%</td>
</tr>
<tr>
<td>3. Transactions vs. C/C++ programs.</td>
<td>34%</td>
</tr>
<tr>
<td>4. Locking vs. two phase locking.</td>
<td>11%</td>
</tr>
<tr>
<td>5. Backups vs. checkpoints.</td>
<td>26%</td>
</tr>
<tr>
<td>6. Access control vs. statistical inference control.</td>
<td>20%</td>
</tr>
<tr>
<td>7. Linear hashing vs. traditional hash table.</td>
<td>26%</td>
</tr>
<tr>
<td>8. Databases vs. data warehouses.</td>
<td>71%</td>
</tr>
<tr>
<td>9. Distributed database vs. Distributed applications (e.g. email) on internet</td>
<td>48%</td>
</tr>
<tr>
<td>10. Object model in SQL vs. Object model in Java/C++.</td>
<td>51%</td>
</tr>
<tr>
<td>11. XML vs. RDF.</td>
<td>20%</td>
</tr>
<tr>
<td>12. Statistics vs. Data Mining.</td>
<td>82%</td>
</tr>
</tbody>
</table>