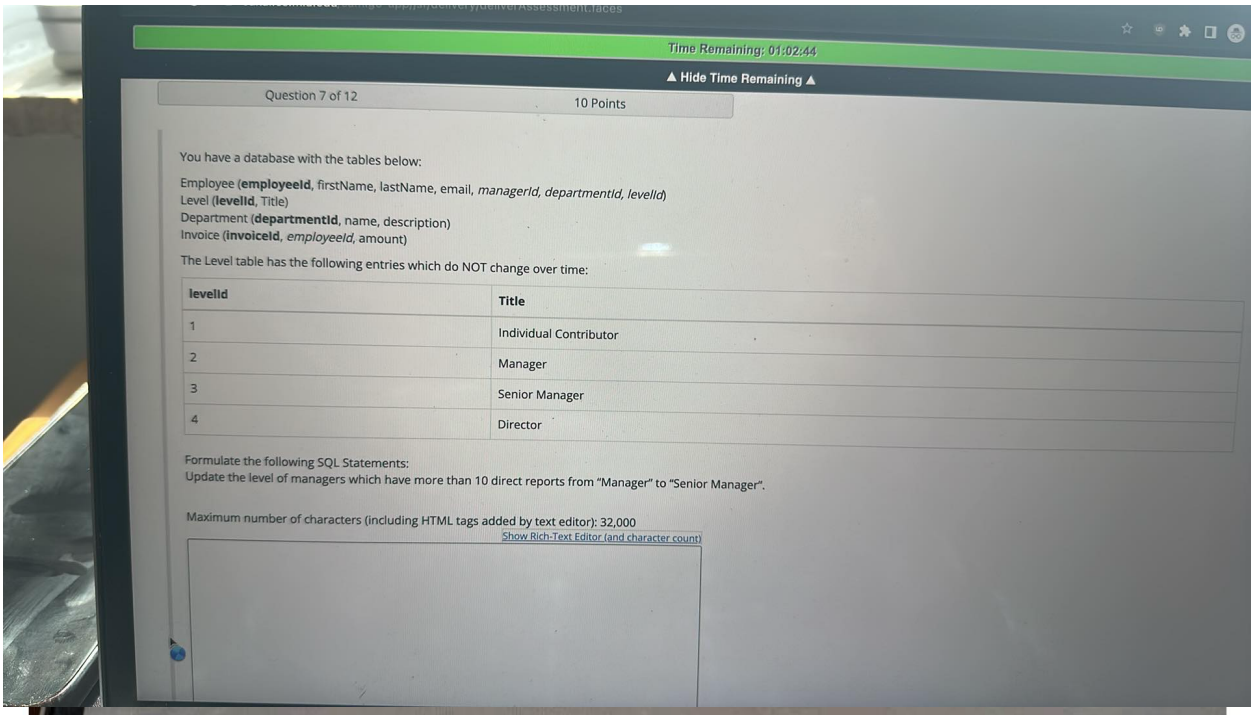

Time Remaining: 01:02:44

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Question 7 of 12 — 10 Points

You have a database with the tables below:

Employee (**employeeId**, firstName, lastName, email, *managerId, departmentId, levelId*)
Level (**levelId**, Title)
Department (**departmentId**, name, description)
Invoice (**invoiceId**, *employeeId*, amount)

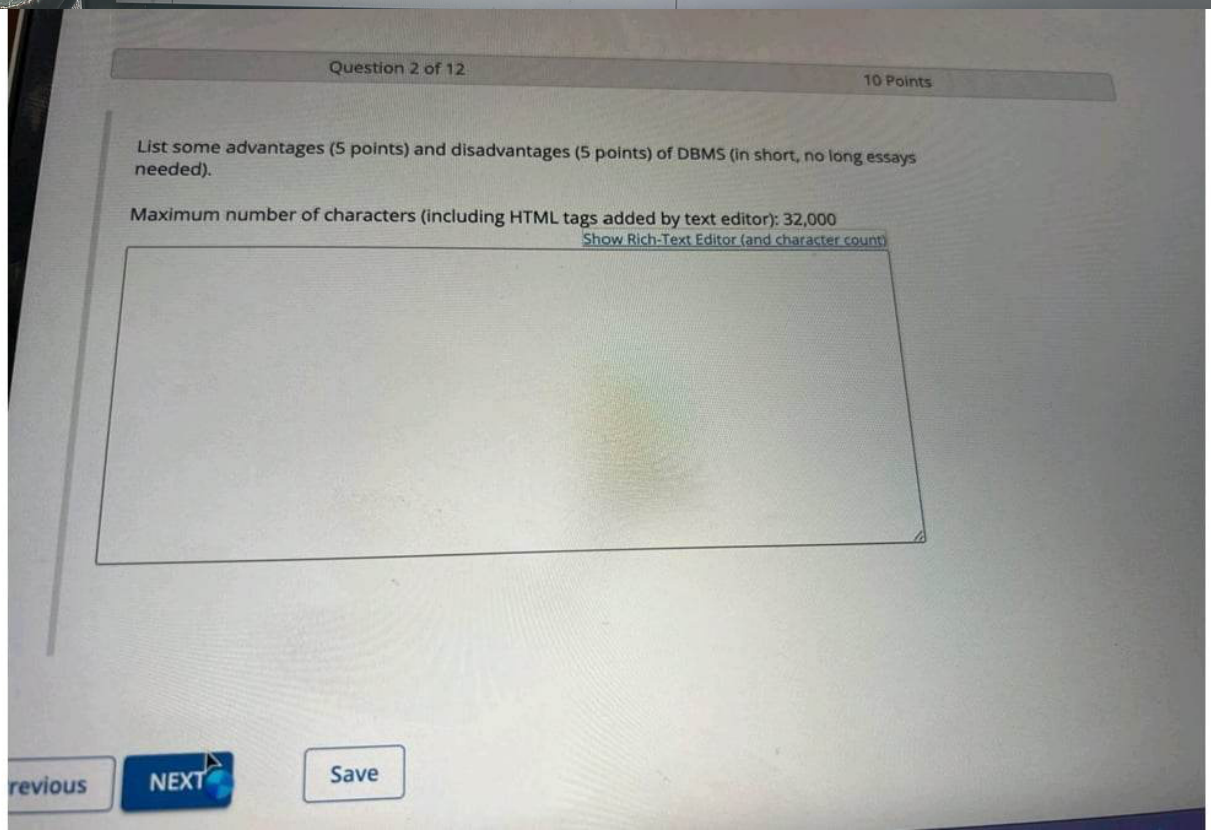
The Level table has the following entries which do NOT change over time:

levelId	Title
1	Individual Contributor
2	Manager
3	Senior Manager
4	Director

Formulate the following SQL Statements:
Update the level of managers which have more than 10 direct reports from "Manager" to "Senior Manager".

Maximum number of characters (including HTML tags added by text editor): 32,000

Show Rich-Text Editor (and character count)



Question 2 of 12 — 10 Points

List some advantages (5 points) and disadvantages (5 points) of DBMS (in short, no long essays needed).

Maximum number of characters (including HTML tags added by text editor): 32,000

Show Rich-Text Editor (and character count)

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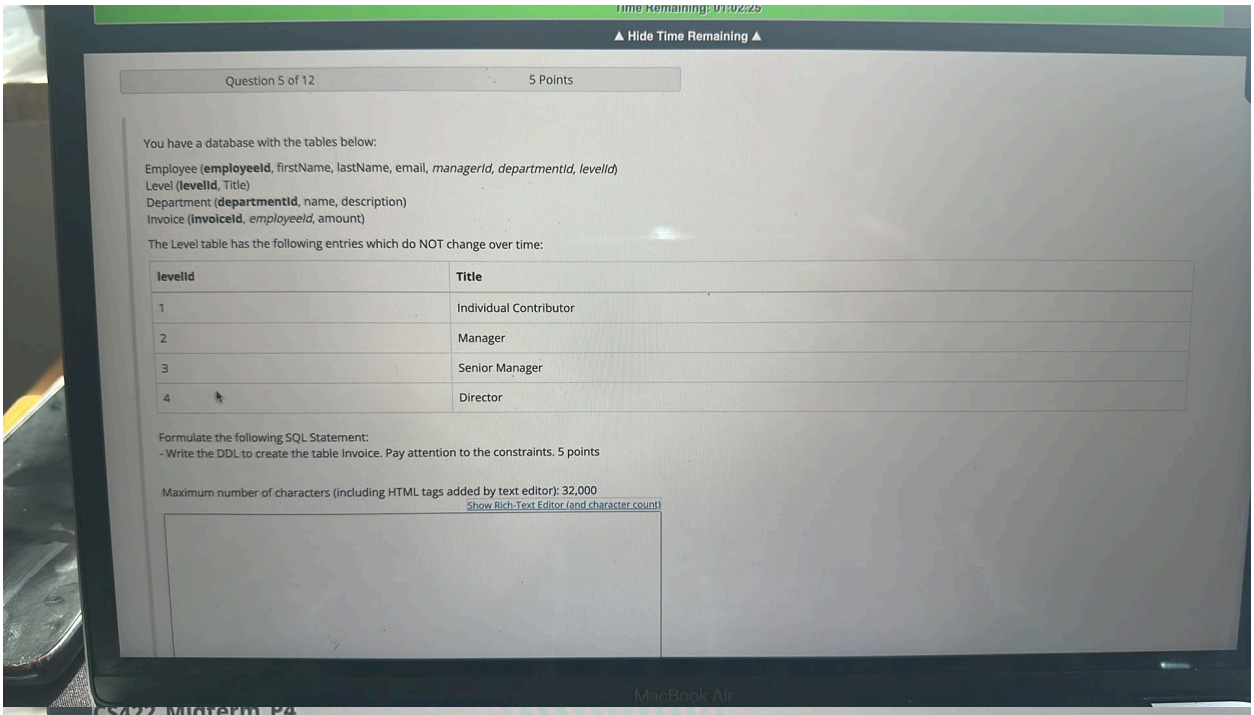
Time Remaining: 01:02:25
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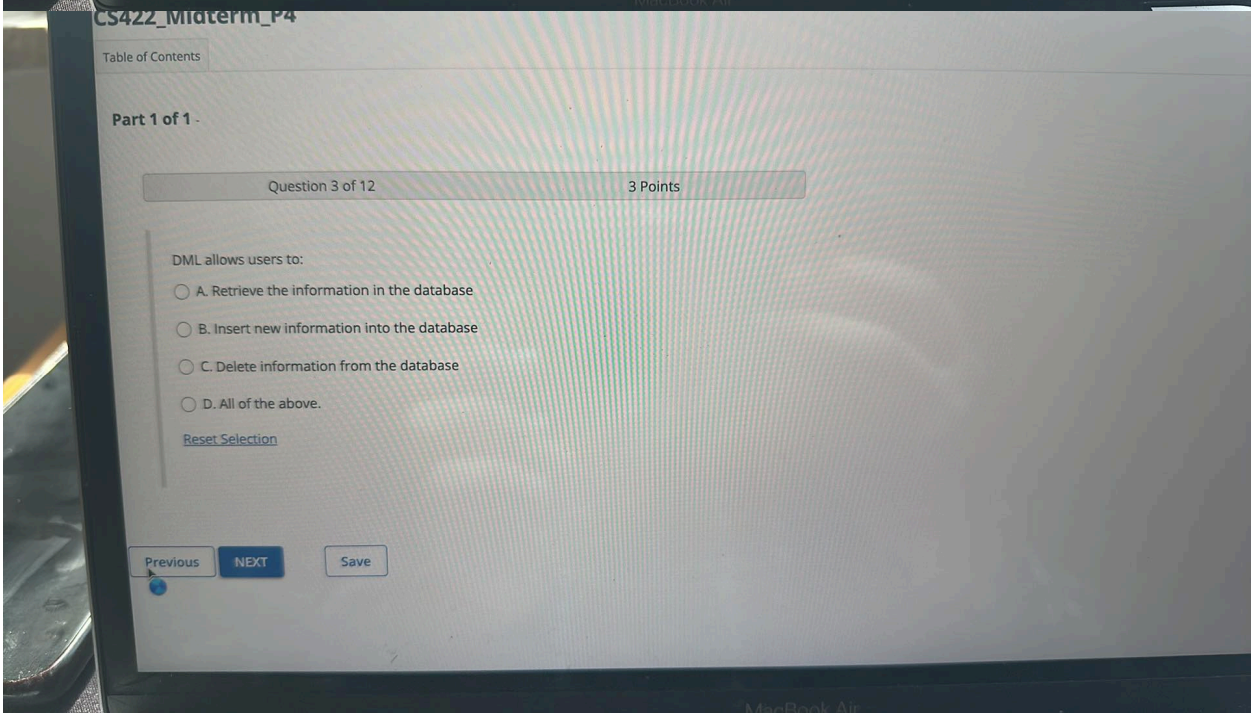
Question 5 of 12
5 Points
You have a database with the tables below:
Employee (employeeId, firstName, lastName, email, managerId, departmentId, levelId)
Level (levelId, Title)
Department (departmentId, name, description)
Invoice (invoiceId, employeeId, amount)
The Level table has the following entries which do NOT change over time:
levelId
Title
1
Individual Contributor
2
Manager
3
Senior Manager
4
Director
Formulate the following SQL Statement:
- Write the DDL to create the table Invoice. Pay attention to the constraints. 5 points
Maximum number of characters (including HTML tags added by text editor): 32,000
Show Rich-Text Editor (and character count)
MacBook Air


CS422_Midterm_P4
Table of Contents
Part 1 of 1
Question 3 of 12
3 Points
DML allows users to:
A. Retrieve the information in the database
B. Insert new information into the database
C. Delete information from the database
D. All of the above.
Reset Selection
Previous
NEXT
Save
MacBook Air

Time Remaining: 01:03:13

▲ Hide Time Remaining ▲

Part 1 of 1 -

Question 10 of 12 | 18 Points

You are the DBMS expert at a small business – "The cake bake shop", a place where people come to order custom cakes for their events. Design the database (create the E-R diagram) and show **the entities and the relationship between the entities.** For simplicity, assume one cake is done by one single employee.
A few queries that your design should be able to answer are:

- What is the most popular cake (most units sold).
- What is the employee (baker) who brought in the most revenue (the SUM of all cakes baked by this employee is the maximum of all employees)
- How many cakes did we sell in a particular time interval (last year for example).

Maximum number of characters (including HTML tags added by text editor): 32,000

Show Rich-Text Editor (and character count)

Time Remaining: 01:03:13

▲ Hide Time Remaining ▲

Part 1 of 1 -

Question 10 of 12 | 18 Points

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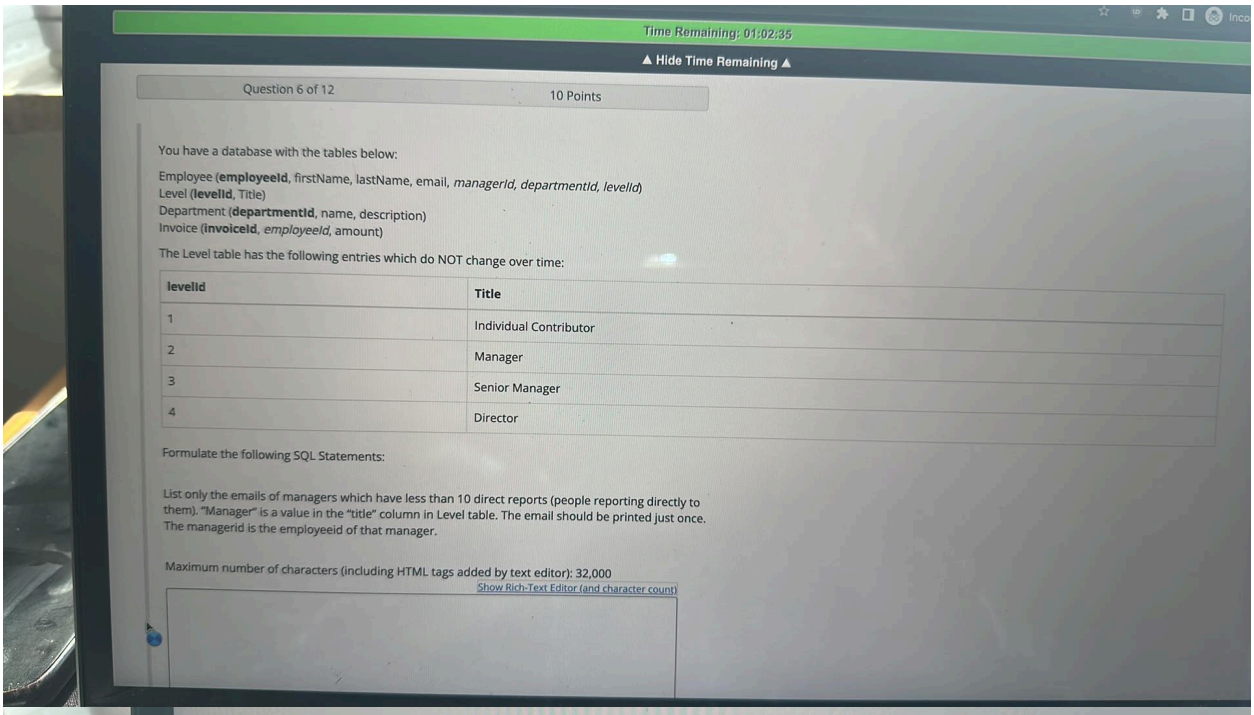
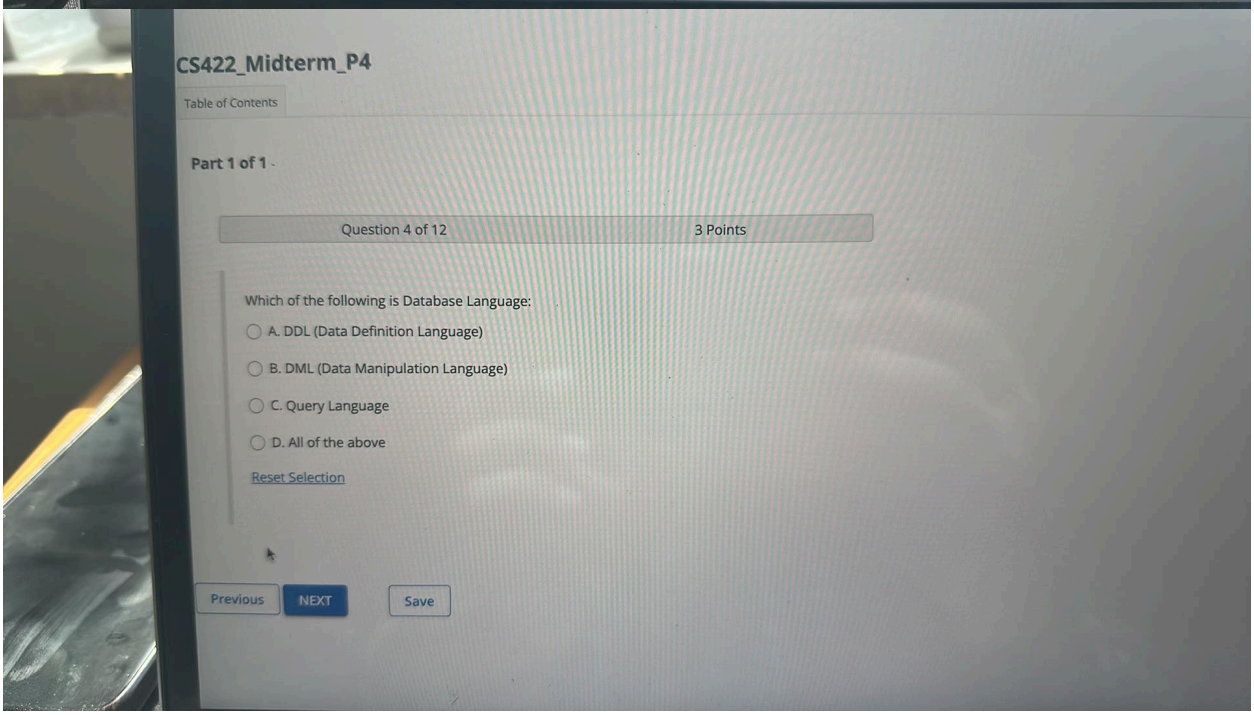
Maximum number of characters (including HTML tags added by text editor): 32,000

Show Rich-Text Editor (and character count)


Time Remaining: 01:02:35
▲ Hide Time Remaining ▲
Question 6 of 12
10 Points
You have a database with the tables below:
Employee (employeeId, firstName, lastName, email, managerId, departmentId, levelId)
Level (levelId, Title)
Department (departmentId, name, description)
Invoice (invoiceId, employeeId, amount)
The Level table has the following entries which do NOT change over time:
levelId
Title
1
Individual Contributor
2
Manager
3
Senior Manager
4
Director
Formulate the following SQL Statements:
List only the emails of managers which have less than 10 direct reports (people reporting directly to them). "Manager" is a value in the "title" column in Level table. The email should be printed just once. The managerid is the employeeid of that manager.
Maximum number of characters (including HTML tags added by text editor): 32,000
Show Rich-Text Editor (and character count)


CS422_Midterm_P4
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Part 1 of 1
Question 4 of 12
3 Points
Which of the following is Database Language:
A. DDL (Data Definition Language)
B. DML (Data Manipulation Language)
C. Query Language
D. All of the above
Reset Selection
Previous
NEXT
Save

Question 1 of 12

5 Points

What are the 5 major components of the DBMS environment?

Maximum number of characters (including HTML tags added by text editor): 32,000

Show Rich Text Editor (and character count)

vious NEXT Save

Time Remaining: 01:02:57

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Question 8 of 12 15 Points

You have a database with the tables below:

Employee (**employeeId**, firstName, lastName, email, *managerId, departmentId, levelId*)
Level (**levelId**, Title)
Department (**departmentId**, name, description)
Invoice (**invoiceId**, *employeeId*, amount)

The Level table has the following entries which do NOT change over time:

levelId	Title
1	Individual Contributor
2	Manager
3	Senior Manager
4	Director

Formulate the following SQL Statements:

For each department, list the name and the total sales made by all employees per level. Your query should produce a table that looks like the table below (the below table is just one example)

departmentName	employeeLevel	totalSales
shoes	Individual Contributor	1232345.50
shoes	Manager	34567.75
clothes	Individual Contributor	50546.99