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Test Name: **MBA: Databases**

Taken On: 2 Aug 2019 10:03:58 PDT

Time Taken: 9 min 56 sec/ 10 min

Work Experience: 1 years

Invited by: Jeff

Invited on: 2 Aug 2019 10:01:34 PDT

Tags Score:

- ACID 10/15
- Advanced 5/10
- Data Structures 0/5
- Databases 55/75
- Easy 15/15
- Essential 30/45
- Join 15/20
- Medium 0/5
- Normalization 5/10
- QA 5/5
- Race Conditions 0/5
- SDET 5/5
- SQL 35/40
- Testing 5/5
- Trees 0/5

68.8%

55/80

scored in **MBA: Databases** in 9 min 56 sec on 2 Aug 2019 10:03:58 PDT


Recruiter/Team Comments:

No Comments.

Question Description	Time Taken	Score	Status
Q1 Which of the following SQL commands can be used to add data to a database table? > Multiple Choice	12 sec	5/ 5	✓
Q2 In a purely normalized database, _____. > Multiple Choice	26 sec	5/ 5	✓
Q3 In an ACID compliant database, multiple transactions that are run concurrently > Multiple Choice	2 min 33 sec	0/ 5	✗
Q4 B - Trees are used commonly for: > Multiple Choice	1 min	0/ 5	✗
Q5 In an ACID compliant database, the results of a completed transaction are stored > Multiple Choice	14 sec	5/ 5	✓

Q6	Given the following table: > Multiple Choice	1 min 7 sec	5/ 5	✓
Q7	In order to mitigate race conditions, a developer can _____. > Multiple Choice	1 min 19 sec	0/ 5	✗
Q8	Which command? > Multiple Choice	8 sec	5/ 5	✓
Q9	Which SQL keyword is used to retrieve a maximum value? > Multiple Choice	17 sec	5/ 5	✓
Q10	In an ACID compliant database, if one action in a transaction fails, _____. > Multiple Choice	5 sec	5/ 5	✓
Q11	Given the following tables: > Multiple Choice	34 sec	5/ 5	✓
Q12	A denormalized database _____. (Select all that apply) > Multiple Choice	29 sec	0/ 5	✗
Q13	In an ACID compliant database, if a transaction to change a row is in the middle > Multiple Choice	6 sec	5/ 5	✓
Q14	Inner Join > Multiple Choice	57 sec	5/ 5	✓
Q15	Full Outer Join > Multiple Choice	10 sec	0/ 5	✗
Q16	Left Join > Multiple Choice	27 sec	5/ 5	✓

QUESTION 1



Correct Answer

Score 5

Which of the following SQL commands can be used to add data to a database table? > Multiple Choice

SQL

Databases

Easy

QUESTION DESCRIPTION

Which of the following SQL commands can be used to add data to a database table?


CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)



☐ ADD



☐ UPDATE


☐ APPEND



☒ INSERT

No Comments

QUESTION 2  Correct Answer	Multiple Choice Databases Normalization Advanced
Score 5	QUESTION DESCRIPTION In a purely normalized database, _____.
	CANDIDATE ANSWER Options: (Expected answer indicated with a tick) <div><input type="radio"/> data is duplicated across multiple tables for redundancy.</div> <div> <input checked="" type="radio"/> all data that that is not unique should be separated into tables and accessed through joins tables.</div> <div><input type="radio"/> groups may be repeated within a single table (e.g. class_id_one, class_id_two, etc. inside of the students table)</div> <div><input type="radio"/> it is not necessary to use primary keys if related data is properly nested.</div> <div>No Comments</div>

QUESTION 3  Wrong Answer	Multiple Choice Databases ACID Essential
Score 0	QUESTION DESCRIPTION In an ACID compliant database, multiple transactions that are run concurrently _____.
	CANDIDATE ANSWER Options: (Expected answer indicated with a tick) <div><input checked="" type="radio"/> will all be executed at the same time, ensuring that the database will only be modified one time.</div> <div> <input type="radio"/> are independently processed at the same time resulting in the same state as if the requests were received sequentially.</div> <div><input type="radio"/> will only be executed if each transaction modifies a different row in the table.</div> <div><input type="radio"/> can result in an invalid database state and should be avoided.</div> <div>No Comments</div>

QUESTION 4  Wrong Answer	B - Trees are used commonly for: > Multiple Choice Data Structures Medium Trees
Score 0	QUESTION DESCRIPTION B - Trees are used commonly for:
	CANDIDATE ANSWER Options: (Expected answer indicated with a tick) <div><input type="radio"/> efficiently sorting very large files</div> <div><input type="radio"/> for checking the consistency of relational databases</div> <div><input checked="" type="radio"/> speeding up database search, delete, and insert operations</div> <div><input type="radio"/> organizing hash tables efficiently</div>
	No Comments

QUESTION 5  Correct Answer	Multiple Choice Databases ACID Essential
Score 5	QUESTION DESCRIPTION In an ACID compliant database, the results of a completed transaction are stored in _____ memory, making it _____ to invalid states due to power loss or crashes.
	CANDIDATE ANSWER Options: (Expected answer indicated with a tick) <div><input type="radio"/> volatile, resilient</div> <div><input checked="" type="radio"/> non-volatile, resilient</div> <div><input type="radio"/> volatile, susceptible</div> <div><input type="radio"/> non-volatile, susceptible</div>
	No Comments

QUESTION 6

Correct Answer

Score 5

Multiple Choice

Databases

SQL

Join

Essential

QUESTION DESCRIPTION

Given the following table:

employees

id	name	manager_id
1	Becky	null
2	Shaun	1
3	Jesse	2
4	Wes	2
5	Jane	2

Fill in the blank to create a SQL query that will return a list of all employees and their managers (or null if there is no manager).


```
SELECT
    employees.name, managers.name AS manager
FROM
    employees
    _____
    employees AS managers ON employees.manager_id = managers.id;
```


CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)


- ☐ JOIN
- ☐ INNER JOIN
- ☒ LEFT JOIN
- ☐ RIGHT JOIN
- ☐ FULL OUTER JOIN

No Comments

QUESTION 7  Wrong Answer	Multiple Choice Databases Race Conditions Essential
Score 0	QUESTION DESCRIPTION In order to mitigate race conditions, a developer can _____.
	CANDIDATE ANSWER Options: (Expected answer indicated with a tick) <div><input checked="" type="radio"/> utilize table and row locking to ensure data consistency. <input type="radio"/> shard their tables into multiple smaller databases to increase performance. <input checked="" type="radio"/> replicate their database to allow concurrent access to data. <input type="radio"/> verify a user's identity before granting access to the database.</div> No Comments

QUESTION 8  Correct Answer	Which command? > Multiple Choice SQL Databases Easy
Score 5	QUESTION DESCRIPTION There are multiple records in a table and some are duplicates. Which command will fetch only one copy of the duplicate records?
	CANDIDATE ANSWER Options: (Expected answer indicated with a tick) <div><input checked="" type="radio"/> <input checked="" type="radio"/> SELECT DISTINCT <input type="radio"/> SELECT UNIQUE <input type="radio"/> SELECT DIFFERENT <input type="radio"/> All of the above</div> No Comments

QUESTION 9



Correct Answer

Score 5

Which SQL keyword is used to retrieve a maximum value? > Multiple Choice

QA

SQL

Testing

SDET

Databases

Easy

QUESTION DESCRIPTION

Which SQL keyword is used to retrieve a maximum value?


CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

☐ TOP


☐ MOST

☐ UPPER

 ☒ MAX

No Comments

QUESTION 10



Correct Answer

Score 5

Multiple Choice

Databases

QUESTION DESCRIPTION

In an ACID compliant database, if one action in a transaction fails, _____.


CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

☐ the new state of the database will reflect the changes made by all EXCEPT the failed action.


☐ the whole transaction will be reset and replayed until it is successful or times out.

☐ the current row(s) will remain locked until until the system is restarted.

 ☒ no part of the transaction will take effect.

No Comments

QUESTION 11



Correct Answer

Score 5

Multiple Choice

Databases

SQL

Essential

QUESTION DESCRIPTION

Given the following tables:

employees

id	name	manager_id
1	Becky	null
2	Jesse	1
3	Shaun	2
4	Wes	2
5	Jane	2

wages

	employee_id	wage
1		200000
2		150000
3		100000
4		80000
5		60000

What is the output of the following SQL query?


```
SELECT
  employees.name
FROM
  employees
WHERE
  employees.id IN (
    SELECT wages.employee_id
    FROM wages
    WHERE wages > 80000
  );
```


CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☐ name
 - Becky
 - Jesse
 - Shaun
 - Wes
 - Jane
- ☐ name
 - Becky
 - Jesse
 - Shaun
 - Wes
- ☒ name
 - Becky
 - Jesse
 - Shaun
- ☐ wage
 - 200000
 - 150000
 - 100000

No Comments

QUESTION 12  Wrong Answer	Multiple Choice Databases Normalization Advanced
Score 0	QUESTION DESCRIPTION A denormalized database _____. (Select all that apply)
	CANDIDATE ANSWER Options: (Expected answer indicated with a tick) <div><input checked="" type="checkbox"/> <input type="radio"/> increases the read performance of a database by reducing the need for joins and subqueries</div> <div><input checked="" type="checkbox"/> <input type="radio"/> increases the space required for a database due to storing repeated data</div> <div><input checked="" type="checkbox"/> <input type="radio"/> is susceptible to inconsistencies where the same data is stored in different tables.</div> <div><input type="radio"/> increase the reliance on joins and subqueries to access related data.</div> <div><input type="radio"/> increases the write performance of a database by only needing to update data in one table.</div>
	No Comments

QUESTION 13  Correct Answer	Multiple Choice Databases ACID Essential
Score 5	QUESTION DESCRIPTION In an ACID compliant database, if a transaction to change a row is in the middle of processing when a request to read the data from that row is received, _____.
	CANDIDATE ANSWER Options: (Expected answer indicated with a tick) <div><input type="radio"/> the database will immediately return the un-modified value.</div> <div><input type="radio"/> the database will immediately return the value in a half-changed state.</div> <div><input checked="" type="checkbox"/> <input type="radio"/> the database will wait for the change transaction to finish and then return the updated value.</div> <div><input type="radio"/> the database will cache the original value, wait for the change transaction to finish, and then return the original value.</div>
	No Comments

QUESTION 14



Correct Answer

Score 5

Inner Join > Multiple Choice

Databases

SQL

Join

Essential

QUESTION DESCRIPTION

Given the following table:

employees

id	name	manager_id
1	Becky	null
2	Shaun	1
3	Jesse	2
4	Wes	2
5	Jane	2

How many rows will the following query generate?

```
SELECT
    employees.name, managers.name AS manager
FROM
    employees
INNER JOIN
    employees AS managers ON employees.manager_id = managers.id;
```

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☒ 4
- ☐ 5
- ☐ 7
- ☐ 8

No Comments

QUESTION 15



Wrong Answer

Score 0

Full Outer Join > Multiple Choice

Databases

SQL

Join

Essential

QUESTION DESCRIPTION

Given the following table:

employees

id	name	manager_id
1	Becky	null
2	Shaun	1
3	Jesse	2
4	Wes	2
5	Jane	2

How many rows will the following query generate?

```
SELECT
    employees.name, managers.name AS manager
FROM
    employees
FULL OUTER JOIN
    employees AS managers ON employees.manager_id = managers.id;
```

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☐ 4
- ☒ 5
- ☐ 7
- ☒ 8

No Comments

QUESTION 16



Correct Answer

Score 5

Left Join > Multiple Choice

SQL

Databases

Join

Essential

QUESTION DESCRIPTION

Given the following table:

employees

id	name	manager_id
1	Becky	null
2	Shaun	1
3	Jesse	2
4	Wes	2
5	Jane	2

How many rows will the following query generate?

```
SELECT
    employees.name, managers.name AS manager
FROM
    employees
LEFT JOIN
    employees AS managers ON employees.manager_id = managers.id;
```

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☐ 4
- ☒ 5
- ☐ 7
- ☐ 8

No Comments