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Full Name:	thomas zangari
Email:	gonzales1609@gmail.com
Test Name:	**AD - KBA - SQL Assessment**
Taken On:	25 Aug 2020 09:20:12 EDT
Time Taken:	32 min 53 sec/ 60 min
Work Experience:	4 years
City:	Richmond
Course:	[TEK Boston] 2020-Java Developer 01
Resume:	https://hackerrank-resumes.s3.amazonaws.com/8107755/Fuwt2Tl95IuLxRLtHC21VQCQqamSVAlPZdQ8Xja1TIeAghWPMUyGUFh_VkU7bH15Ag/Thomas_Zangari.pdf
Invited by:	James
Invited on:	24 Aug 2020 19:30:01 EDT
Skills Score:	
Tags Score:	SQL 110/135

81.5%

110/135

scored in **AD - KBA - SQL Assessment** in 32 min 53 sec on 25 Aug 2020 09:20:12 EDT

Recruiter/Team Comments:

No Comments.

	Question Description	Time Taken	Score	Status
Q1	You cannot use a subquery... > **Multiple Choice**	1 min 47 sec	5/ 5	✓
Q2	Given the below statement... > **Multiple Choice**	2 min 53 sec	0/ 5	✗
Q3	What will this statement... > **Multiple Choice**	1 min 46 sec	5/ 5	✓
Q4	A Primary Key must be which ... > **Multiple Choice**	2 min 59 sec	5/ 5	✓
Q5	Which select statement will return ... > **Multiple Choice**	21 sec	5/ 5	✓
Q6	Which JOIN is the ANSI-standard method of... > **Multiple Choice**	15 sec	5/ 5	✓
Q7	ORDER BY ... > **Multiple Choice**	11 sec	5/ 5	✓
Q8	You can use a combination ... > **Multiple Choice**	43 sec	5/ 5	✓
Q9	Why will this query generate... > **Multiple Choice**	6 min 37 sec	5/ 5	✓
Q10	Multiple types of JOINs... > **Multiple Choice**	25 sec	5/ 5	✓

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Q11	What does a CROSS JOIN... > Multiple Choice	9 sec	5/ 5	✓
Q12	How could you modify the following... > Multiple Choice	1 min 3 sec	0/ 5	✗
Q13	All tables MUST have at least one... > Multiple Choice	24 sec	5/ 5	✓
Q14	What will the following... > Multiple Choice	46 sec	0/ 5	✗
Q15	What will be the results of ... > Multiple Choice	1 min 43 sec	5/ 5	✓
Q16	It is possible for a primary key to > Multiple Choice	13 sec	5/ 5	✓
Q17	The ID column of the Products table... > Multiple Choice	3 min 30 sec	5/ 5	✓
Q18	Given two tables, EMP and SAL, how would you ... > Multiple Choice	55 sec	5/ 5	✓
Q19	We use constraints for ... > Multiple Choice	26 sec	5/ 5	✓
Q20	What will this query... > Multiple Choice	1 min 10 sec	5/ 5	✓
Q21	Which of the following will remove ... > Multiple Choice	1 min 7 sec	0/ 5	✗
Q22	A table In a relational database... > Multiple Choice	12 sec	5/ 5	✓
Q23	In MariaDB databases, the value of a primary key... > Multiple Choice	1 min 3 sec	5/ 5	✓
Q24	What does the WHERE... > Multiple Choice	12 sec	5/ 5	✓
Q25	Why would normalized tables ... > Multiple Choice	38 sec	0/ 5	✗
Q26	Which is correct regarding ... > Multiple Choice	37 sec	5/ 5	✓
Q27	Which statement will change ... > Multiple Choice	33 sec	5/ 5	✓

QUESTION 1

✓

Correct Answer

Score 5

You cannot use a subquery... > Multiple Choice   SQL

QUESTION DESCRIPTION

You cannot use a subquery while also using an aggregate function.

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

○ True

✓ ● False

No Comments

/

Given the below statement... > Multiple Choice   SQL

QUESTION DESCRIPTION

Given the below statement, what would happen if the inner query returned an empty list?

```
SELECT * FROM employees
WHERE employeeId NOT IN
(
    SELECT employeeId
    FROM employees
    WHERE departmentId = 14
);
```

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

○ A cartesian product would be returned

○ All values in the employees table for employees with department_id of 14 would be returned.

✓ ○ All of the values in the employees table would be returned for employees who are not in the department with an id of 14.

⦿ No values would be returned.

No Comments

QUESTION 3

✅ Correct Answer

Score 5

What will this statement... › Multiple Choice `SQL`

QUESTION DESCRIPTION

What will this statement return?

```
SELECT e.name, s.salary,
CASE WHEN s.salary > 200001 THEN 'VERY HIGH'
        WHEN s.salary > 90000 THEN 'HIGH'
        ELSE 'MID' END AS Income_Bracket
FROM employees e INNER JOIN salaries s ON e.id = s.emp_id;
```

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ✅ ⦿ The name, salary, and income_bracket of 'VERY HIGH', 'HIGH' or 'MID' based on salary
- ◯ The query will result in an error.
- ◯ The name, salary, and a null income_bracket.
- ◯ Nothing

No Comments

QUESTION 4

✅ Correct Answer

Score 5

A Primary Key must be which ... › Multiple Choice `SQL`

QUESTION DESCRIPTION

A Primary Key must be which of the following?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ◯ Numeric
- ✅ ⦿ Non-Null
- ◯ Automatically Generated
- ✅ ⦿ Unique
- ◯ A single field

No Comments

/

QUESTION 5

✓ Correct Answer

Score 5

Which select statement will return ... › Multiple Choice SQL

QUESTION DESCRIPTION

Which SELECT statement will return the largest salary in the salaries table?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ✓ ● SELECT MAX(SALARY) FROM SALARIES;
- ○ SELECT MAXIMUM(SALARY) FROM SALARIES;
- ○ SELECT SALARY FROM SALARIES WHERE SALARY=MAX;
- ○ SELECT LARGEST(SALARY) FROM SALARIES;

No Comments

QUESTION 6

✓ Correct Answer

Score 5

Which JOIN is the ANSI-standard method of... › Multiple Choice SQL

QUESTION DESCRIPTION

Which JOIN is the ANSI-standard method of generating a Cartesian Product?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ○ NATURAL
- ○ FULL
- ○ None of the above
- ✓ ● CROSS

No Comments

QUESTION 7

✓ Correct Answer

Score 5

ORDER BY ... › Multiple Choice SQL

QUESTION DESCRIPTION

ORDER BY sorts data in descending order by default.

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ○ True
- ✓ ● False

No Comments

/

You can use a combination ... › Multiple Choice [SQL]

QUESTION DESCRIPTION

You can use a combination GROUP BY, HAVING and WHERE clauses in one SQL statement.
True or False, and why?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

○ False - these clauses can never be used together.

○ True, but only if the WHERE clause comes last.

○ False - these clauses can only be used in an UPDATE statement.

✓ ● True, but the WHERE clause must precede the GROUP BY clause and
the HAVING clause must come after the GROUP BY clause.

No Comments

Why will this query generate... › Multiple Choice [SQL]

QUESTION DESCRIPTION

Why will this query generate an error?

```
SELECT employee_id, salary
FROM employees INNER JOIN salaries ON employee_id = employee_id
WHERE salary >= 75000;
```

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

○ >= is not a valid operator.

✓ ● The join predicate's 'employee_id' field is ambiguous.

○ The above query will not return an error.

○ No employees with a salary greater than or equal to 75000 exist in the
database.

No Comments

/

QUESTION 10

Correct Answer

Score 5

Multiple types of JOINs... › Multiple Choice [SQL]

QUESTION DESCRIPTION

Multiple types of JOINs (ie: INNER, LEFT OUTER) can be used in the same query.

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ✓ ● True
- ○ False

No Comments

QUESTION 11

Correct Answer

Score 5

What does a CROSS JOIN... › Multiple Choice [SQL]

QUESTION DESCRIPTION

What does a CROSS JOIN return?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ✓ ● A cartesian product.
- ○ The diagonal fields from each joined table.
- ○ There is no such thing as CROSS JOIN.
- ○ The same result as an INNER JOIN and FULL OUTER JOIN combined.

No Comments

/

How could you modify the following... › Multiple Choice `SQL`

QUESTION DESCRIPTION

How could you modify the following query in order to ONLY count customers with a first_name starting with "T"?

```sql
SELECT c.last_name, c.first_name, COUNT(o.orderNumber)
FROM customers c LEFT JOIN orders o ON c.customer_id = o.customer_id
GROUP BY c.customer_id;
```

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ○ Use a WHERE clause at the end of the query.
- ✓ ○ Use a WHERE clause before the GROUP BY.
- ○ Use a HAVING clause before the GROUP BY.
- ● This cannot be done.

No Comments

All tables MUST have at least one... › Multiple Choice `SQL`

QUESTION DESCRIPTION

All tables In a relational database MUST contain at least one Foreign Key.

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ✓ ● False
- ○ True

No Comments

/

What will the following... > Multiple Choice `SQL`

QUESTION DESCRIPTION

What will the following query return?

```sql
SELECT e.employee_id, e.firstname, e.lastname
FROM employees e LEFT OUTER JOIN salaries s ON e.employee_id =
s.employee_id
WHERE s.salary = NULL;
```

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ○ All employee_id, firstname, and lastname values in the employees table.
- ○ Only employee_id, firstname, and lastname values in the employees table that have no matching entry in the SAL table.
- ◉ A syntax error would be returned.
- ✅ ○ No values would be returned.

No Comments

What will be the results of ... > Multiple Choice `SQL`

QUESTION DESCRIPTION

What will be the results of the following statement?

```sql
UPDATE PAYMENTS SET status= 'paid'
WHERE payment_id NOT IN
(
    SELECT payment_id
    FROM ACCOUNTS_PAYABLE
    WHERE status in ('pending', 'rejected')
);
```

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ○ The statement will return an error.
- ○ Nothing will happen because the nested query will always return null
- ○ Payments that are 'pending' or 'rejected' in the ACCOUNTS_PAYABLE table will have their status set to 'paid'.
- ✅ ◉ Payments that are neither 'pending' nor 'rejected' in the ACCOUNTS_PAYABLE table will have their status set to 'paid'.

No Comments

/

Correct Answer

Score 5

It is possible for a primary key to › Multiple Choice `SQL`

QUESTION DESCRIPTION

It is possible for a primary key to consist of multiple fields.

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

✅ ● True

○ False

No Comments

Correct Answer

Score 5

The ID column of the Products table... › Multiple Choice `SQL`

QUESTION DESCRIPTION

The ID column of the Products table corresponds to the Product_ID column of the OrderItems table.

Your client would like to display a list of all orders along with the name and price of the items associated with that order. Which of the following joins would allow you to do that?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

○ Self Join

○ Cross Join

○ Non-Equi-Join

✅ ● Inner Join

No Comments

/

Given two tables, EMP and SAL, how would you ... › Multiple Choice `SQL`

QUESTION DESCRIPTION

Given two tables, EMP and SAL, how would you add a foreign key constraint on the emp_no column in the SAL table, referring to the id column in the EMP table?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

○ Use the ALTER TABLE command with the ADD clause on the EMP table.

○ Use the ALTER TABLE command with the MODIFY clause on the SAL table.

○ Use the ALTER TABLE command with the MODIFY clause on the EMP table.

✓ ● Use the ALTER TABLE command with the ADD clause on the SAL table.

No Comments

We use constraints for ... › Multiple Choice `SQL`

QUESTION DESCRIPTION

We use constraints for which of the following reasons?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

✓ ● They enhance data integrity and provide adherence to business requirements.

○ They add an additional level of complexity to the table.

○ They remove potential backdoors in our table that hackers could otherwise exploit.

○ Because our boss told us to. There is no other reason.

No Comments

/

QUESTION 20

✓ Correct Answer

Score 5

What will this query... › Multiple Choice [SQL]

QUESTION DESCRIPTION

What will this query return?

```sql
SELECT *
FROM products p LEFT OUTER JOIN orderdetails od ON p.id = od.product_id
WHERE od.product_id is null;
```

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ○ Everything for products that have an id of null.
- ✓ ● Everything for products that have no entry in the orderdetails table.
- ○ Nothing because product_id is null.
- ○ This query will result in an error.

No Comments

QUESTION 21

✗ Wrong Answer

Score 0

Which of the following will remove ... › Multiple Choice [SQL]

QUESTION DESCRIPTION

Which of the following will remove the foreign key named fk_employee_id from the SAL table?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ○ ALTER TABLE SAL REMOVE FOREIGN KEY fk_employee_id;
- ● ALTER TABLE SAL DROP FOREIGN KEY fk_employee_id;
- ○ ALTER TABLE SAL REMOVE CONSTRAINT fk_employee_id;
- ✓ ○ ALTER TABLE SAL DROP CONSTRAINT fk_employee_id;

No Comments

/

QUESTION 22

✓

Correct Answer

Score 5

A table In a relational database... › Multiple Choice SQL

QUESTION DESCRIPTION

A table In a relational database CAN be created WITHOUT a Primary Key.

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

✓ ● True

○ False

No Comments

QUESTION 23

✓

Correct Answer

Score 5

In MariaDB databases, the value of a primary key... › Multiple Choice SQL

QUESTION DESCRIPTION

In the MariaDB database, the value of a primary key can be automatically generated by creating and using what?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

○ A pseudo column

○ The value of a primary key cannot be automatically generated

○ The value of a primary key is automatically generated by default.

✓ ● An AUTO_INCREMENT keyword.

No Comments

/

Correct Answer

Score 5

What does the WHERE... > Multiple Choice SQL

QUESTION DESCRIPTION

What does the WHERE clause do?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

○ It defines the source of data to be imported into the database.

○ WHERE is used to define a JOIN predicate.

○ It defines the table(s) from which data is selected.

✓ ● It defines one or more conditions that must be met for a row of data to be returned.

No Comments

Wrong Answer

Score 0

Why would normalized tables ... > Multiple Choice SQL

QUESTION DESCRIPTION

Why would normalized tables be preferred over denormalized tables in a database?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

○ None of the other answers.

✓ ● Because they reduce the amount of redundancy

● Because they require user validation and are therefore more secure.

○ They are never preferred. Denormalized tables will always be better.

✓ ● Normalized tables simplify data maintenance.

No Comments

/

Correct Answer

Score 5

Which is correct regarding ... > Multiple Choice   SQL

QUESTION DESCRIPTION

Which is correct regarding these two statements?
1. SELECT employee_id, salary FROM SAL ORDER BY salary DESC;
2. SELECT employee_id, salary FROM SAL ORDER BY 2 DESC;

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ● The two statements will produce identical results.
- ○ Statement 2 will return an error.
- ○ Since 2 is a constant and ordering by a constant is indeterminate, the outcome cannot be determined.
- ○ There is no need to specify DESC as results are in descending order by default.

No Comments

Correct Answer

Score 5

Which statement will change ... > Multiple Choice   SQL

QUESTION DESCRIPTION

Which statement will change the city of a customer with the customer_id of 23 to "NYC"?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ○ ALTER TABLE customers MODIFY city='NYC' WHERE customer_id=23;
- ● UPDATE customers SET city='NYC' WHERE customer_id=23;
- ○ UPDATE customers MODIFY city='NYC' WHERE customer_id=23;
- ○ ALTER TABLE customers SET city='NYC' WHERE customer_id=23;

No Comments

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