

## Module 3: Week 1 Review

100%

**1. The WHERE clause in a SQL statement ...**

- ☐ (A) limits the column fields that are returned.
- ☒ (B) limits the row data that is returned.
- ☐ (C) states which table to retrieve data from.
- ☐ (D) A and B
- ☐ (E) I don't know

**2. Which WHERE clause correctly looks for null data in the population column?**

- ☐ (A) SELECT \* FROM country WHERE population = NULL;
- ☐ (B) SELECT \* FROM country WHERE population = 'NULL';
- ☒ (C) SELECT \* FROM country WHERE population IS NULL;
- ☐ (D) SELECT \* FROM country WHERE population == NULL;
- ☐ (E) I don't know

**3. Select the code which gives the name of countries beginning with U**

- ☐ (A) SELECT name FROM world WHERE name BEGIN WITH U;
- ☐ (B) SELECT name FROM world WHERE name LIKE '%U'
- ☐ (C) SELECT name  
FROM world  
WHERE name LIKE '%u%'
- ☐ (D) SELECT name  
FROM world  
WHERE name LIKE U
- ☒ (E) SELECT name  
FROM world  
WHERE name LIKE 'U%'
- ☐ (F) I don't know

**4. Given a table called Books, write the SQL statement used to SELECT all columns from the table.**

```
select * from books;
```

**5. Assume the data pictured was stored in a table named "person".**

**What would be the first name of the person in the second row returned by the following query:**

```
SELECT first_name, last_name  
FROM person  
ORDER BY last_name DESC, first_name;
```

- ☐ A Sarah
- ☒ B Gary
- ☐ C Alice
- ☐ D Barb
- ☐ E John
- ☐ F Michael
- ☐ G I don't know

first_name	last_name	gender	state_of_residence
Sarah	Baker	female	PA
Gary	Smith	male	PA
Alice	Woodard	female	OH
Barb	Green	female	OH
John	Smith	male	PA
Michael	Baker	male	OH

- ✓ 6. Assume the data pictured is stored in a table named "person".

How many rows would be returned by the following query:

```
SELECT last_name, count(*)
FROM person
GROUP BY last_name;
```

4

first_name	last_name	gender	state_of_residence
Sarah	Baker	female	PA
Gary	Smith	male	PA
Alice	Woodard	female	OH
Barb	Green	female	OH
John	Smith	male	PA
Michael	Baker	male	OH

- ✓ 7. Assume the data pictured is stored in a table named "person".

How many rows would be returned by the following query:

```
SELECT gender, count(*)
FROM person
GROUP BY gender;
```

2

first_name	last_name	gender	state_of_residence
Sarah	Baker	female	PA
Gary	Smith	male	PA
Alice	Woodard	female	OH
Barb	Green	female	OH
John	Smith	male	PA
Michael	Baker	male	OH

- ✓ 8. Assume the data pictured is stored in a table named "person".

How many rows would be returned by the following query:

```
SELECT state_of_residence, gender, count(*)
FROM person
GROUP BY state_of_residence, gender;
```

4

first_name	last_name	gender	state_of_residence
Sarah	Baker	female	PA
Gary	Smith	male	PA
Alice	Woodard	female	OH
Barb	Green	female	OH
John	Smith	male	PA
Michael	Baker	male	OH

- ✓ 9. Which column represents the foreign key in the Wages table?

- ☐ A Wage\_Id
- ☒ B Employee\_Id
- ☐ C HourlyRate
- ☐ D TaxRate
- ☐ E I don't know

Employee			
Employee_Id	First_Name	Last_Name	Department
10001	Linda	Mojito	Sales
10002	Chuck	Powers	Finance
10003	Heartless	John	HR
10004	Indiana	Jones	Sales

  

Wages			
Wage_Id	Employee_Id	HourlyRate	TaxRate
1	10001	25	20%
2	10002	20	25%
3	10003	25	15%
4	10004	30	20%

  

HoursWorked			
TimeCard_Id	Employee_Id	NormalHours	OvertimeHours
1	10001	36	0
2	10002	40	0
3	10003	45	5
4	10004	50	10
5	10001	44	4

✓ 10. What is the result of the following query?

```
SELECT Employee.Department, SUM(HoursWorked.NormalHours)
FROM Employee
INNER JOIN HoursWorked ON Employee.Employee_Id = HoursWorked.Employee_Id
GROUP BY Employee.Department
ORDER BY Employee.Department;
```

- ☐ A Finance 40  
HR 45  
Sales 36  
Sales 44  
Sales 50
- ☐ B Sales 130  
HR 45  
Finance 40
- ☒ C Finance 40  
HR 45  
Sales 130
- ☐ D Finance 40  
HR 45  
Sales 36
- ☐ E I don't know

Employee			
Employee_Id	First_Name	Last_Name	Department
10001	Linda	Mojito	Sales
10002	Chuck	Powers	Finance
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Wages			
Wage_Id	Employee_Id	HourlyRate	TaxRate
1	10001	25	20%
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HoursWorked			
TimeCard_Id	Employee_Id	NormalHours	OvertimeHours
1	10001	36	0
2	10002	40	0
3	10003	45	5
4	10004	50	10
5	10001	44	4

✓ 11. True or False? A Foreign Key column cannot contain the same value in more than one row (i.e. values must be unique).

- ☐ A True
- ☒ B False
- ☐ C I don't know

✓ 12. INSERT INTO person ( person\_id, first\_name, middle\_name, last\_name ) VALUES ( 101, 'Emerson', 'Ralph', 'Waldo' );

```
SELECT first_name
FROM person
WHERE person_id = 101;
```

What value would be returned by the SELECT statement?

- ☐ A Ralph

- ☐ B Waldo
- ☒ C Emerson
- ☐ D I don't know

✓ 13. Assume the data pictured was stored in a table named "president".

If the following series of statements were run:

BEGIN TRANSACTION;

UPDATE president  
SET number = number \* 2;

ROLLBACK;

What value would be returned by the following SELECT statement?

SELECT last\_name  
FROM president  
WHERE number = 4;

Madison

FIRST_NAME	LAST_NAME	NUMBER	TERM_BEGIN	TERM_END
George	Washington	1	1789-04-30	1797-03-04
John	Adams	2	1797-03-04	1801-03-04
Thomas	Jefferson	3	1801-03-04	1809-03-04
James	Madison	4	1809-03-04	1817-03-04
James	Monroe	5	1817-03-04	1825-03-04

✓ 14. For a given column in a database row, it is acceptable to hold multiple values.

- ☐ A True
- ☒ B False

✓ 15. When normalizing a database table, any column that is not dependent on the primary key should be broken out into its own table.

- ☒ A True
- ☐ B False