

السؤال 1

1 درجات

تم الحل ✓

The result of difference operation  $(R-S)$  is a relation with tuples from  $S$  but not from  $R$ .

☒ خطأ ☐ صواب

السؤال 2

1 درجات  تم الحفظ

Intersection operation produces all combinations of tuples from two relations.

☒ خطأ ☐ صواب

السؤال 2 من 37 <

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Projection is binary operator that limits the attributes that will be returned from the original relation.

خطأ ☒ صواب ☐

Relational Algebra is a collection of operations on Relations.

☒ صواب ☐ خطأ

السؤال 5

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تم الحفظ

The projection operation acts like a filter on a relation by returning only a certain number of tuples.

☒ خطأ ☐ صواب

Attributes of relations need not be identical to perform union, intersection and difference operations.

☒ صواب ☐ خطأ

The SQL command that removes all the referencing tuples in the child table:

- None of the answers ☐
- ON DELETE CASCADE ☒
- ON DELETE REMOVE CHILD ☐
- ON DELETE SET NULL ☐

Most components of SQL statements are case sensitive

☒ صواب ☐ خطأ



The child table must be created first, so that the parent table will reference an existing child table when it is created.

صواب ☐  
خطأ ☒

**CREATE VIEW** **TABLE** command is used to create virtual table.

خطأ ☒ صواب ☐

Which of the following is not a part of Data Definition Language (DDL) tasks

Populates, retrieves, and updates tables ☒

Controls access to the data ☐

Defines the database structure ☐

None of the answers ☐

Data type **VARCHAR(n)** is flexible and saves space more than **CHAR(n)**

خطأ ☐ صواب ☒

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A NULL represents:

- Absence of a value ☒
- Zeros ☐
- All of the answers ☐
- Spaces ☐



تم الحفظ

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Derived attribute age can be represented using UML notations as \age

صواب ☐خطأ ☒

The query:

```
SELECT employeeID
```

```
FROM Employee
```

```
WHERE bonus > 500;
```

contains search condition of type:

None of the answers ☐

Set Membership ☐

Comparison ☒

Range ☐

This part of SELECT statement can determine which rows will be displayed in the result:

FROM ☐

SELECT ☐

HAVE ☐

WHERE ☒



To change the "First Name" of "Ahmad" into "Omar" in table Employee, we write:

- UPDATE Employee SET FirstName='Ahmad' INTO FirstName='Omar' ☐
- MODIFY Employee SET FirstName='Omar' WHERE FirstName='Ahmad' ☐
- MODIFY Employee SET FirstName='Ahmad' INTO FirstName='Omar' ☐
- UPDATE Employee SET FirstName='Omar' WHERE FirstName='Ahmad' ☒

This SQL statement:

```
INSERT INTO Student(studentID, name, city)  
VALUES (1234, 'Ahmad');
```

is:

خطأ ☒ صواب ☐

The following clauses are optional in the SELECT statements:

WHERE ☐

GROUP BY ☐

ORDER BY ☐

All of the answers ☒

The query:

```
SELECT branchNo, branchAddress  
FROM BranchData  
WHERE branchAddress IN ('Makkah', 'Jeddah');
```

contains search condition of type:

Comparison ☐

Set membership ☒

Range ☐

None of the answers ☐

In the design of a relational database management system (RDBMS), the process of organizing data to **minimize** redundancy is called:

- Design of conceptual model ☐
- Requirements analysis ☐
- Normalization ☒
- Mapping to relational model ☐

A relational database table is often described as "normalized" if it is:

- In the Second Normal Form (2NF) ☐
- In the First Normal Form (1NF) ☐
- None of the answers ☐
- In the Third Normal Form (3NF) ☒

The database will be in 1NF if every attribute in every row can contain only one single (atomic) value and there are no repeating groups in the table.

صواب ☒  
خطأ ☐

The goal of database normalization is to decompose relations with anomalies in order to produce smaller, unstructured relations.

صواب ☐  
خطأ ☒



When any non-key attribute depends on any other non-key attribute in a given relation ,this is

- Repeating groups ☐
- None of the answers ☐
- Partial dependency ☐
- Transitive dependency ☒

When non key attribute depends on only part of the primary key not on the whole primary key, this is called:

- None of the answers ☐
- Transitive dependency ☐
- Partial dependency ☒
- Repeating groups ☐

In subqueries: the results of outer SELECT statement are used in the inner SELECT statement to help determine the final result.

خطأ ☒ صواب ☐

HAVING clause cannot be used without GROUP BY clause in a SELECT statement.

☒ صواب ☐ خطأ

To retrieve all records from Employee table sorted by FirstName in a descending order, we write:

SELECT \* FROM Employee SORT BY 'FirstName' DESC; ☐

SELECT \* FROM Employee SORT 'FirstName' DESC; ☐

SELECT \* FROM Employee ORDER FirstName DESC; ☐

SELECT \* FROM Employee ORDER BY FirstName DESC; ☒

In this query:

```
SELECT BranchNo, COUNT(staffNo)
```

```
FROM Branch_Staff
```

```
GROUP BY BranchNo
```

```
ORDER BY BranchNo;
```

The processing order of clauses is:

- FROM, GROUP BY, SELECT, then ORDER BY ☒
- FROM, SELECT, GROUP BY, then ORDER BY ☐
- FROM, SELECT, ORDER BY, then GROUP BY ☐
- SELECT, FROM, GROUP BY, then ORDER BY ☐

This query:

```
SELECT studentD, fName, lName, Address  
ORDER BY studentID ASC;  
FROM Student
```

Is:

خطأ ☒ صواب ☐

An alias can be used for a table named in the WHERE clause, where the alias is separated from the table name with a space.

خطا ☒ صواب ☐



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One of the factors that affect DBMS purchasing decision is cost.

صواب ☒  
خطأ ☐

In Logical Database Design Phase, there are two design strategies: top-down and bottom-up.

صواب ☐  
خطأ ☒

Address: 'House\_no: City: State' is:

- Single attribute ☐
- Derived attribute ☐
- Multivalued attribute ☐
- Composite attribute ☒



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None of the \_\_\_\_\_'s attributes can have NULL values

- Super Key ☐
- Primary Key ☒
- Candidate Key ☐
- Alternate Key ☐

\_\_\_\_\_ relation exists when one instance of the first entity (parent) can relate to many instances of the second entity (child), and one instance of the second entity can relate to many instances of the first entity

M – to – M ☒

M – to – 1 ☐

1 – to – 1 ☐

1 – to – M ☐