#### Final DB 2020 – 1442 Dr. Asma

#### Question 1

The number of instances of one entity type that may be associated with each instance of the other entity type:

- <sub>O</sub> Binary relationship
- \_ Ternary relationship
- Cardinality of relationship
- $_{\odot}$  None of the answers

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

- $_{\odot}$  Alternate Key
- $_{\odot}$  Candidate Key
- Primary Key
- $_{\odot}$  Super Key

There can be multiple Candidate Keys in one table. Each Candidate Key can qualify as Super Key.

- True
- False

The outcome of the \_\_\_\_\_ phase is an entity-relationship diagram

- Conceptual Design
- \_ Logical Design
- $_{\odot}$  Requirement analysis
- O Physical Design

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In the database development process, business rules are clarified in \_\_\_\_\_\_ Phase.

- Requirement Analysis
- $_{\odot}$  Conceptual Design
- $_{\odot}$  Logical Design
- $_{\odot}$  Physical Design

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

o True ○ False

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This query:

SELECT staffName, Salary

FROM staffData

WHERE Salary > AVG(Salary);

Is:

O True • False
```

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

- $_{\bigcirc}$  SELECT \* FROM Employee SORT 'FirstName' DESC;
- $_{\bigcirc}$  SELECT \* FROM Employee ORDER FirstName DESC;
- $_{\bigcirc}$  SELECT \* FROM Employee SORT BY 'FirstName' DESC;
- SELECT \* FROM Employee ORDER BY FirstName DESC;

To obtain information from more than one table, you may use a subquery or a join operation.

● True ○ False

This query:

SELECT studentD, fName, IName, Gender

FROM Student

HAVING Gender='F';

Is:

O True • False

```
This query:

SELECT studentD, fName, IName, Address

ORDER BY studentID ASC;

FROM Student

Is:

O True • False
```

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

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

The following clauses are mandatory in the SELECT statements:

- None of the answers
- $_{\odot}$  WHERE
- $_{\odot}$  GROUP BY
- $_{\odot}$  ORDER BY

The following clauses are optional in the SELECT statements:

- $_{\odot}$  GROUP BY
- $_{\odot}$  WHERE
- $_{\odot}$  ORDER BY
- All of the answers

The query:

SELECT branchNo, branchAddress

FROM BranchData

WHERE branchAddress IN ('Makkah', 'Jeddah');

contains search condition of type:

- $_{\odot}$  Comparison
- Range
- $_{\odot}$  None of the answers
- Set membership

To delete the records where the FirstName is "Ahmad" in the Employee Table, we write:

- DELETE FROM Employee FirstName = 'Ahmad'
- \_ DELETE ROW FirstName = 'Ahmad' FROM Employee
- O DELETE FirstName = 'Ahmad' FROM Employee
- DELETE FROM Employee WHERE FirstName = 'Ahmad'

To eliminate duplicates in the result, we use ...... in the SELECT statement:

- DISTINCT
- $_{\circ}$  UNIQUE
- $_{\odot}$  None of the answers
- $_{\odot}$  DIFFERENT

The number of attributes in a relation is called:

- $_{\circ}$  Tuple
- $_{\odot}$  Domain of attribute
- Degree of relation
- $_{\odot}$  None of the answers

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

- True
- False

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

- $_{\odot}$  In the First Normal Form (1NF)
- In the Third Normal Form (3NF)
- $_{\odot}$  In the Second Normal Form (2NF)
- $_{\odot}$  None of the answers

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

- $_{\odot}$  Repeating groups
- $_{\odot}$  None of the answers
- Transitive dependency
- O Partial dependency

1 points

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

- $_{\odot}$  Requirements analysis
- $_{\odot}$  Design of conceptual model
- $_{\odot}$  Mapping to relational model
- Normalization

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

- $_{\odot}$  Repeating groups
- $_{\odot}$  None of the answers
- $_{\odot}$  Transitive dependency
- Partial dependency

1 points Saved

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.

True

False

1 points

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

True

False

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

○ True ⊚ False

Relational Algebra is a collection of operations on Relations.

Intersection operation produces all combinations of tuples from two relations.

○ True ● False

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

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

○ True ● False

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

● True ○ False

ALTER TABLE Student

ADD (Address VARCHAR(30));

is used to change the definition of Table Student by adding a new column.

- True
- False

```
The output of:
SELECT DATE_FORMAT(SYSDATE( ), ' %Y/%m/%d ')
FROM DUAL;
is:
2020/12/23
o 2020/23/12
_{\odot} None of the answers
<sub>0</sub> 12/23/2020
```

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

True

False

**DROP TABLE Employee**; remove table Employee but does not remove its data.

○ True ● False

Most components of SQL statements are case sensitive

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

- Populates, retrieves, and updates tables
- Controls access to the data
- $_{\scriptscriptstyle \bigcirc}$  Defines the database structure
- $_{\odot}$  None of the answers