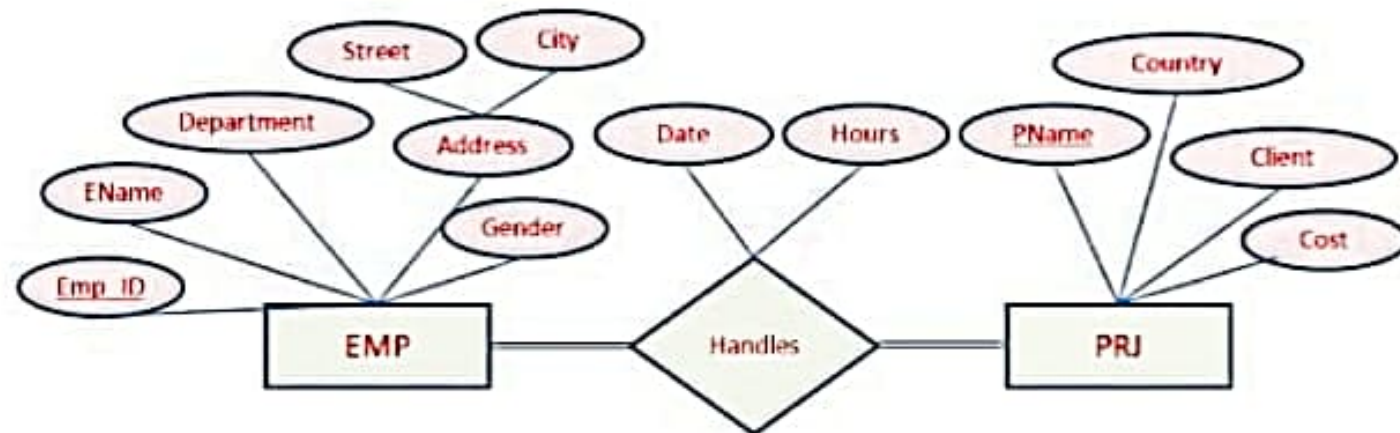


حفظ الإجابة

1 نرجلت

السؤال 4



Based on the above ERD and based on the assumption that the relationship between EMP and PRJ is M-M, If we have 300 and 200 entities in EMP and PRJ entity sets respectively, what would be the maximum number of entities the Handles relationship set would have

- a. 300 ☐
- b. 200 ☐
- c. 500 ☐
- d. 60000 ☒

- 300 .a ☐  
200 .b ☐  
500 .c ☐  
60000 .d ☒

السؤال 5

1 درجات



Relationships among entities of a single class are called

- IS-A relationships .a ☐  
Recursive relationships .b ☒  
HAS-A relationships .c ☐  
None .d ☐

السؤال 6

1 درجات



In an ER Diagram, a double ellipse is used to represent

- Simple Attribute .a ☐  
Composite Attribute .b ☐  
Descriptive Attribute .c ☐  
Multi-valued Attribute .d ☒

السؤال 1



1 درجات

A cricket player can play for exactly one team, and a team can consist of several players. What type of relationship exists between team and player *from team to player*

- One-to-one .a ☐
- One-to-many .b ☒
- Many-to-One .c ☐
- Many-to-Many .d ☐

السؤال 2



1 درجات

Consider a university database, this database has a course with attributes (C#, name, description). Each course may have a number of sessions, and for each session, we keep track of Date, start time, and end time. Each session is held on a room, and for each, we keep track of room\_id and capacity. Which of the following is a correct answer

- Room entity is optional for session entity .a ☐
- Course entity is optional for session entity .b ☐
- .In physical model the identifier of room entity are its identifier and Course identifier only .c ☐
- Course entity is mandatory for session entity .d ☒

السؤال 3



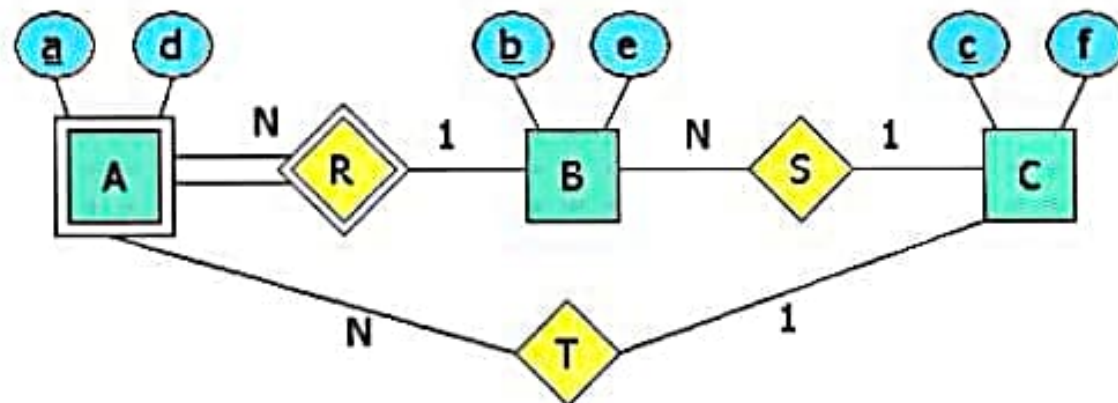
1 درجات

السؤال 3

1 درجات

تم الحل

: Given the following Diagram



Identify the foreign key columns in relation A from the list below that would be constructed when converting the schema into physical schema

b,c,a ☐

c,b ☒

a,c ☐

b,d ☐

employee person-name works))

$\pi$  person-name ( $\sigma$  company-name = "First Bank Corporation" (works))



1 درجت

السؤال 6

**:Given the following schema**

Manufacturer (ManufacturerID, ManufacturerName, ManufacturerCity)

Product (ProductID, ProductName, Model)

Description (ManufacturerID, ProductID, Price)

**.Find the name of manufacturers who sell products of either model 1 or model 2**

$\pi$  ManufacturerName ( ( $\sigma_{\text{Model}=1 \wedge \text{Model}=2}$  Description)  $\bowtie$  Description ProductID=Product ProductID Manufacturer  $\bowtie$  Description ManufacturerID = Manufacturer ManufacturerID Product ) ☐

$\pi$  ManufacturerName ( ( $\sigma_{\text{Model}=1 \wedge \text{Model}=2}$  Product)  $\bowtie$  Description ProductID=Product ProductID Description  $\bowtie$  Description ManufacturerID = Manufacturer ManufacturerID Manufacturer ) ☐

$\pi$  ManufacturerName ( ( $\sigma_{\text{Model}=1 \vee \text{Model}=2}$  Product)  $\bowtie$  Description ProductID=Product ProductID Description  $\bowtie$  Description ManufacturerID = Manufacturer ManufacturerID Manufacturer ) ☒



Consider the following relational database schema for publications

author(author\_id, firstname, lastname)

author\_pub(author\_id, pub\_id, author\_position)

book(book\_id, book\_title, month, year, editor)

pub(pub\_id, title, book\_id)

Note: editor in book is a foreign key referencing author (author\_id)

**Retrieve the names of all authors who have at least one publication**

$\Pi_{\text{firstname, lastname}} (\text{author} * \text{author\_pub})$  ☒

$\Pi_{\text{firstname, lastname}} (\Pi_{\text{author\_id}} (\text{author}) \cup \Pi_{\text{author\_id}} (\text{author\_pub}))$  ☐

$\Pi_{\text{firstname, lastname}} ((\Pi_{\text{author\_id}} (\text{author}) - \Pi_{\text{author\_id}} (\text{author\_pub})) * \text{author})$  ☐

$\Pi_{\text{firstname, lastname}} (\Pi_{\text{author\_id}} (\text{author}) \cap \Pi_{\text{author\_id}} (\text{author\_pub}))$  ☐

:Given the following Schema

*employee* (person-name, street, city)

*works* (person-name, company-name, salary)

*company* (company-name, city)

*manages* (person-name, manager-name)

.Find the names of all employees who work for First Bank Corporation

$\pi$  person-name ( $\sigma$  company-name = "First Bank Corporation" (works  $\infty$  works person-name =  
manages.person-name employee)) ☐

$\pi$  person-name ( $\sigma$  company-name = "First Bank Corporation" (manages  $\infty$  works person-name =  
employee person-name works)) ☐

$\pi$  person-name ( $\sigma$  company-name = "First Bank Corporation" (works)) ☒



السؤال 1

1 درجات

تم الحفظ

?How many tables may be included with a join

All of the mentioned ,1 ☒

3,2 ☐

5,3 ☐

2,4 ☐

السؤال 2

1 درجات

تم الحفظ

Which of the join operations do not preserve non matched tuples

Left outer join ,1 ☐

Right outer join ,2 ☐

none of the above ,3 ☐

Inner join ,4 ☒

السؤال 3

1 درجات

خط الإجابة

Consider the following relational database schema



<input type="checkbox"/>	Phone
<input type="checkbox"/>	Fax
<input type="checkbox"/>	HomePage

<input type="checkbox"/>	ShipName
<input type="checkbox"/>	Freight
<input type="checkbox"/>	ShipAddress
<input type="checkbox"/>	ShipCity
<input type="checkbox"/>	ShipRegion
<input type="checkbox"/>	ShipPostalCode
<input type="checkbox"/>	ShipCountry

<input type="checkbox"/>	ContactName
<input type="checkbox"/>	ContactTitle
<input type="checkbox"/>	Address
<input type="checkbox"/>	City
<input type="checkbox"/>	Region
<input type="checkbox"/>	PostalCode
<input type="checkbox"/>	Country
<input type="checkbox"/>	Phone
<input type="checkbox"/>	Fax

.Display the result starting from customers with the most recent order dates

```

SELECT CustomerID , COUNT(OrderID) AS NumberOfOrders, MAX(OrderDate) AS.1 ☒
    LastOrderDate
    FROM Orders
    WHERE YEAR (OrderDate) > 1997
    GROUP BY CustomerID
    HAVING COUNT(OrderID) > 8
    ORDER BY LastOrderDate DESC

SELECT CustomerID , COUNT(OrderID) AS NumberOfOrders, MAX(OrderDate) AS.2 ☐
    LastOrderDate
    FROM suppliers
    WHERE YEAR (OrderDate) > 1997
    GROUP BY CustomerID
    HAVING COUNT(OrderID) > 8
    ORDER BY LastOrderDate DESC

SELECT CustomerID , COUNT(OrderID) AS NumberOfOrders, MAX(OrderDate) AS.3 ☐
    LastOrderDate
    FROM Orders
    WHERE YEAR (OrderDate) < 1997
    GROUP BY CustomerID
    HAVING COUNT(OrderID) < 8
    ORDER BY LastOrderDate DESC

```

Inner join 4

السؤال 3

تم الحل 1 درجات

Consider the following relational database schema

Supplier(sid, sname, address)

Part(pid, pname, colour)

Catalog(sid, pid, cost)

Find the IDs of suppliers who supply red or green part.

$\pi_{sid} (Supplier * (\sigma_{colour="green" \vee colour="red"} (Part)))$  ☒

$\pi_{sid} (Catalog * (\sigma_{colour="green" \vee colour="red"} (Part)))$  ☐

$\pi_{sid} (Supplier * (\sigma_{colour="green" \wedge colour="red"} (Part)))$  ☐

$\pi_{sid} (Catalog * (\sigma_{colour="green" \wedge colour="red"} (Part)))$  ☐

السؤال 4

حفظ الإجابة 1 درجات

Consider the following relational database schema for publications

<input type="checkbox"/>	Fax
<input type="checkbox"/>	HomePage

<input type="checkbox"/>	ShipName
<input type="checkbox"/>	ShipAddress
<input type="checkbox"/>	ShipCity
<input type="checkbox"/>	ShipRegion
<input type="checkbox"/>	ShipPostalCode
<input type="checkbox"/>	ShipCountry

<input type="checkbox"/>	ContactName
<input type="checkbox"/>	Address
<input type="checkbox"/>	City
<input type="checkbox"/>	Region
<input type="checkbox"/>	PostalCode
<input type="checkbox"/>	Country
<input type="checkbox"/>	Phone
<input type="checkbox"/>	Fax

Given Northwind Schema, choose the correct answer to Get the date of the shipped order, last name, and job title of the employee responsible for that order for all employees that have last names containing an A character. Display the result based on employee last names from A → Z

1. ☐ `SELECT ShippedDate, LastName , Title  
FROM Orders INNER JOIN Employees  
ON Orders.EmployeeID = Employees.EmployeeID  
WHERE LastName = 'A'  
ORDER BY LastName`
2. ☐ `SELECT ShippedDate, LastName  
FROM Orders INNER JOIN Employees  
ON Orders.EmployeeID = Employees.EmployeeID  
WHERE LastName LIKE '%A'  
ORDER BY LastName`
3. ☒ `SELECT ShippedDate, LastName , Title  
FROM Orders INNER JOIN Employees  
ON Orders.EmployeeID = Employees.EmployeeID  
WHERE LastName LIKE '%A'  
ORDER BY LastName`
4. ☐ `SELECT ShippedDate, LastName , Title  
FROM Orders, Employees  
ON Orders.EmployeeID = Employees.EmployeeID  
WHERE LastName LIKE '%A'  
ORDER BY LastName`



from [Order Details]  
 group by orderid  
 ,having sum((quantity) \* (unitprice)) > 500  
 select orderid, sum ((quantity) \* (unitprice)) as total,4 ☐  
 from [Order Details]  
 ,having sum((quantity) \* (unitprice)) > 500

السؤال 3

1 درجات حفظ الإجابة

Which of the following is not a valid aggregate function

COMPUTE.1 ☒

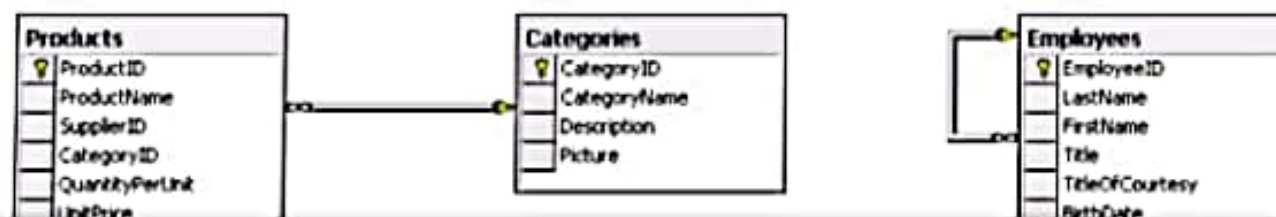
COUNT.2 ☐

SUM.3 ☐

MAX.4 ☐

السؤال 4

1 درجات حفظ الإجابة



Address
City
Region
PostalCode
Country
Phone
Fax
HomePage

EmployeeID
OrderDate
RequiredDate
ShippedDate
ShipVia
Freight
ShipName
ShipAddress
ShipCity
ShipRegion
ShipPostalCode
ShipCountry

<b>Customers</b>
CustomerID
CompanyName
ContactName
ContactTitle
Address
City
Region
PostalCode
Country
Phone
Fax

- select orderid, sum ((quantity) \* (unitprice)) as total ,1 ☒
- from [Order Details]  
group by orderid  
having sum((quantity) \* (unitprice)) > 500
- select orderid, sum ((quantity) \* (unitprice)) as total ,2 ☐
- from [Order Details]  
group by orderid  
having sum((quantity) \* (unitprice)) < 500
- select orderid, count ((quantity) \* (unitprice)) as total ,3 ☐
- from [Order Details]  
group by orderid  
having sum((quantity) \* (unitprice)) > 500
- select orderid, sum ((quantity) \* (unitprice)) as total ,4 ☐
- from [Order Details]  
having sum((quantity) \* (unitprice)) > 500



- Client (ClientID, ClientName, ClientAddress, ClientEmail, ClientPhone,Postal Code, Country, CategoryID) •
- Book (BookISBN, BookTitle, BookEdition, PubYear, UnitPrice, UnitsInStock) •
- .Category (CategoryID, CategoryName, Description) •
- Employee (EmployeeID, EmployeeName, Title, Country, Salary) •
- Order (OrderID, OrderDate, EmployeeID, ClientID) •
- 'Get Book names that start with the letter 'A'

select BookTitle .1 ☒  
from Book  
where BookTitle like ('A%')

select BookTitle .2 ☐  
from Book  
where BookTitle like ('A')

select BookTitle .3 ☐  
from Book  
where BookTitle like ('%A%')

select BookTitle .4 ☐  
from Book  
where BookTitle like ('%A')