

Q1)

Create or replace function rates (CompName Varchar2)
IS

Average Number;
Comp_id Number;

Begin

Select ~~Company~~ C.CompNo, C.AverageSalary
into comp_id, Average
FROM Company C

WHERE C.Comp Name=CompName;

IF Average > MAX(AVG(Average salary)) THEN
RETURN ('HIGH RATE');

ELSIF Average < MIN(AVG(Average salary))
< Average < MAX(Avg(Average salary))
THEN

RETURN ('AVERAGE RATE');

ELSE

RETURN ('LOW RATE');

END IF;

END rates;

CSE4DBF EXAM Michael Le 21689299 #1

Q2). A.

CREATE OR REPLACE PROCEDURE company-share (comp-id NUMBER)

AS

CURSOR shareCursor IS
SELECT SH.SH-ID, SH.LNAME, SH.FNAME, SH.ADDRESS,
SH.PHONE, SH.CITY, SH.JOIN-DATE
FROM SHARE HOLDERS SH, SHARES S
WHERE ~~comp-id = SH.SH-ID~~ SH.SH-ID = comp-id
~~AND S.SH-ID = SH.SH-ID~~ #
AND SH.SH-ID = S.SH-ID
AND SH.SHARE AMOUNT > 1000;

BEGIN

FOR sharePointer IN shareCursor LOOP
DBMS_OUTPUT.PUT_LINE('sharePointer.SH-ID || "
|| sharePointer.LNAME || " ||
sharePointer.FNAME || " ||
sharePointer.ADDRESS || " ||
sharePointer.PHONE || " ||
sharePointer.CITY || " ||
sharePointer.JOIN-DATE);
END LOOP;

END company-share;

/

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CREATE OR REPLACE TRIGGER UPdate_share

~~AFTER~~

BEFORE INSERT ON SHARES

FOR EACH ROW

BEGIN

UPDATE SHARES SET

STUDY

SELECT STUDENT

INTO

FROM

END UPdate_Share

/

Q4). 21089299. (A).

STEP 4 (Super classes only / normal entities).

CILENT (clientNo, clientName, streetAddress, suburb, postcode, phoneNo, faxNo, contactName, joiningDate)

ORDER (orderNo, deliveryDate, deliveryTime, invoiceID)

SUPPLIER (supplierNo, supplierName, address, contactNo)

STOREORDER (orderNo, orderDate)

ITEM (name, type, retailCost, stockLevel, unit)

SANDWICH_COMBO (comboNo, comboName, comboPrice)

STEP 2: (Weak entities)

No weak entities.

STEP 3: (1-1 Relationship?)

No 1-1 Relationship.

STEP 4: (1-N Relationship?)

Platter Order (isBulk, platterQuantity, isRegular*)

School Order (taxExPercent, salesTaxNo*)

Item (name, type, retailCost, stockLevel, unit, ~~supplierNo~~*)

Supplier (supplierNo, supplierName, address, contactNo, name*)

— Primary Key
* Foreign Key

~~EP~~ Step 5: (M:N Relationship)

~~EF~~ CONTAINS(comboNo*, quantity, taxEx Percent)

~~SR~~ CONSISTS-ITEM(name*, isBulk*)

~~SEC~~ SUPPLIES(name*, unit, currentCost*)

~~ADP~~ CONSISTS-ITEMSC(name*, combo*)

~~SE~~ ORDERITEM(name*, quantity, cost, supplierNo*,
orderNo*) IGNORE THIS.

~~SI~~ SUPPLIES(name*, supplierNo*, unit, currentCost)

~~EN~~ Step 6: (Multivalued attribute?)

No multivalued attributes.

Step 7:

(n-ary (>2) Relationship?)

ORDERITEM(name*, quantity, cost, supplierNo*,
orderNo*)

STEP 8:

Using only Option 8A

8A

Client (clientNo, clientName, streetAddress, suburb, postcode,
phone No., Fax No., contactName,
Normal Client (clientNo, is Regular) joining Date
School (clientNo, sales Tax EXN O)

flatterOrder(orderNo, isBulk, platterQuantity)

School Order(order No, fax ExPercent)

Repeat steps 2-7

Step 2 No weak entity

Step 3 No 1-1 Relationship

Step 4

Platter Order: order No. is Bulk platter quantity, client No.

School Order (~~client~~
~~order NO.~~, fax ExPerCent, sales *
Client NO.)

Step 5 No N:M relationship

Step 6 No multivalued attributes

Step 7 No ternary Relationships.

FINAL TABLES: Using SA.

CILENT(clientNo, clientName, streetAddress, suburb, postCode,
phoneNo, faxNo, contactName, joiningDate)

SCHOOL ORDER(orderNo, taxExRate, ClientNo*)

PLATTER ORDER(orderNo, isBulk, platterQuantity, ClientNo*)

SCHOOL (clientNo, salesTaxExNo)

NormalClient(clientNo, isRegular)

CONTAINS (comboNo*, quantity, taxExPercent)

consists-item (name*, isBulk*)

consists-item Sc (name*, combo*)

Supplies(name*, supplierNo*, unit, currentCost)

Order_item(name*, supplierNo*, orderNo*, quantity,
cost)

Order (orderNo, deliveryDate, deliveryTime, invoiced)

Supplier(supplierNo, supplierName, address, contactNo)

Store Order(orderNo, orderDate)

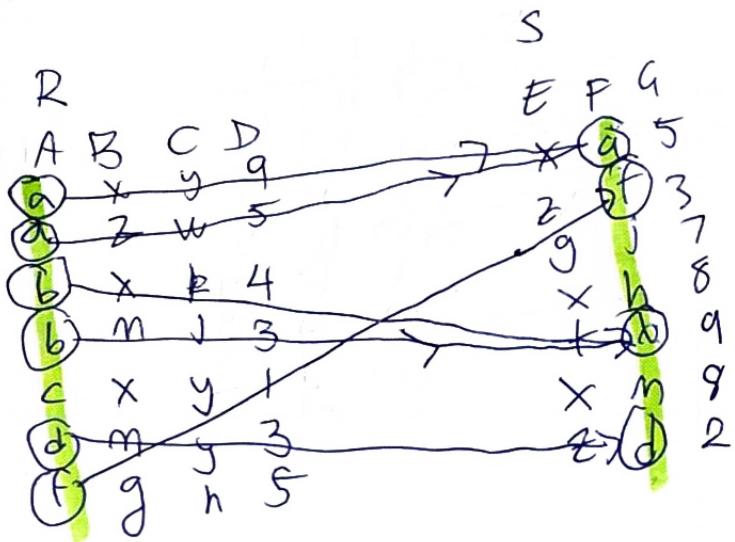
ITEM(name, type, retailCost, stockLevel, unit)

Sandwich_combo (combo No, comboName, comboPrice)

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(Q5). R



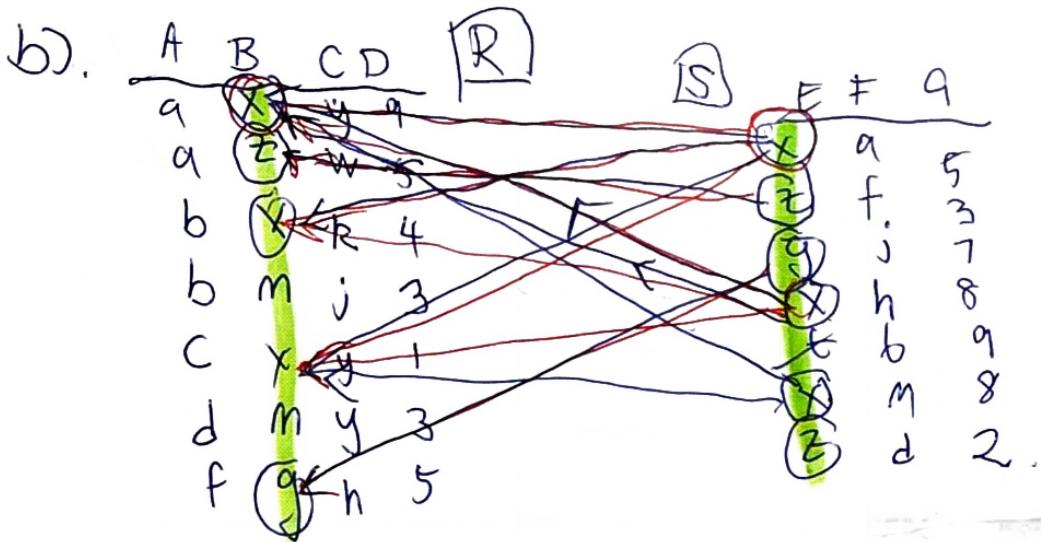
a). Result, $\leftarrow \text{TT}_{A, B, E} (\sigma_{D \neq 9} (R \bowtie_{R.A = S.F} S))$

$(R \bowtie_{R.A = S.F} S)$

A	D	E
b	4	t
b	3	t

final answer.

b). Next page: ↗



$$\text{temp}_1 \leftarrow \pi_{A,C,E,F.} (R \bowtie_{R.B=S.E} S)$$

A	C	E	F
a	y	x	a
c	y	x	a
a	y	x	m
c	y	x	m
a	w	z	f
f	h	g	j
q	y	x	m
a	y	x	h
null	null	t	b
a	w	z	d

b	R	X	a
b	k	x	h
b	k	x	m

$$\text{Temp}_2 \leftarrow \pi_{A,C,E,F.} (R \bowtie_{R.B=S.E} S)$$

like Temp₁,
only follow
in the inner-join.

$$\text{Result}_2 \leftarrow \pi_{E,F.} (\text{Temp}_1 - \text{Temp}_2)$$

A	C	E	F
a	c	t	b

C). ~~Temp~~

Result₁ ∪ Result₂.

A	D	E	F
b	4	6	null
b	3	6	null
null	null	e	b

(Q5)

Q.)

UNF

~~UNF~~

No Repeating Group

PROJECT(ProjName, ProjStartDate, Priority, ProjType,
ProjBudget, (ProjTeam, ProjTeamLeader, (PersonName,
PersonRole, PersonContact, PersonSkill)))

1NF

PROJECT (ProjName, ProjStartDate, Priority,
ProjType, ProjBudget, ProjTeam, ProjTeamLeader,
PersonName, PersonRole, PersonContact, PersonSkill)

2NF

Project_Details(ProjName, ProjStartDate) ~~ProjStartDate~~
~~ProjBudget~~

Project_Type(~~ProjName~~, ProjType, Priority, Project)

~~Team_Employee~~(Proj)

Person_Contact(ProjName, ProjType, Priority,
ProjBudget, ProjTeam, PersonName,
PersonRole, PersonContact, PersonSkill).

Q6).

a).

INF

Project (ProjName, ProjStartDate, Priority,
ProjType, ProjBudget, ProjTeam, ProjTeamLeader
PersonName, PersonRole, PersonContact, PersonSkills).

2NF

Project_Details (ProjName, ProjType, Priority, ProjBudget)

Personal-details (ProjTeam, PersonName, PersonRole~~;~~; ProjTeam,
, ProjStartDate, ProjTeamLeader, PersonContact, PersonSkill)

3NP

Project_details(ProjName, ProjType, ProjStart Date)

Project_BC(Priority, Proj Budget)

Personal ~~details~~^{title} (ProjTeam, PersonName, PersonRole)

~~Person~~ ~~Region~~

Person - Details (Person Name, Person Contact, Person Skill)

(Q6b).

UNF, INF

Author-Pub (Book, title, AuthorName, AuthorContact,
Publisher, PublisherCity, BookType, Price)

2NF:

Author-book details (Book, title, Publisher, PublisherCity, BookType,
AuthorPersonalDetails (AuthorName, ~~AuthorName~~ AuthorContact))
^{Price}

3NF:

~~Author-bookTitle (Book, title),~~
~~Author-PersonalDetails (AuthorName, AuthorContact)~~
~~Publisher-details (Publisher, PublisherCity, BookType,~~
~~Price)~~

Author-Book details (Book, title, BookType, Price)

Publisher-details (Book*, Publisher, PublisherCity)

Author-Personal Details. (Book*, AuthorName, AuthorContact)

Q(6c)

Relation R

i). $\left[\begin{array}{l} \text{Relation-}R_1(A, B, C) \\ \text{Relation-}R_2(A, B, D) \\ \text{Relation-}R^3(C) \end{array} \right] ?$

1) $A, B \rightarrow C, D$

2) $B \rightarrow C, D$
 $A \rightarrow \cancel{C}, \cancel{D}$

(Q7a)

```
SELECT ProductID, ProductName, VendorID, ProductPrice  
FROM PRODUCT  
WHERE CategoryID = 'FW'  
AND ProductPrice <= 110;
```

(Q7b)

```
SELECT ProductID, ProductName, ProductPrice  
FROM PRODUCT  
ORDER BY ProductPrice DESC;
```

(Q7c)

```
SELECT
```