### KONGU ENGINEERING COLLEGE, PERUNDUARI- 638060 DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING DATABASE MANAGEMENT SYSTEMS LABORATORY MODEL LAB

#### Instructions:

- 1. Primary Key (Roll\_NO) should NOT be used in where condition to fetch record.
- 2. Fetch data using Age, City and other relevant columns in where condition
- 3. There will be multiple ways or options to get solutions. Feel free to give more than one solution for same problem.

#### Question:1

Table: Student

ROLLNO	NAME	ACE		
101	ANU	AGE	BRANCH	CITY
102		22	CSE	MUMBAI
103	RAJU	21	ECE	DELHI
	RANI	33	MSC	
104	PETER	26	CSE	CHENNAI
105	SEETHA	22		DELHI
106	MANI		CSE	NOIDA
107		22	ECE	JAIPUR
20,	BABU	23	MSC	RAMPUR

### 1. Write SQL statement to get below output

ROLLNO	NAME	AGE	BRANCH	CITY
102	RAJU	24	The second secon	CITY
	NAJU	21	ECE	DELHI
104	PETER	26	CSE	
			CSE	DELHI

### 2. Write SQL statement to get below output

ROLLNO	NAME	AGE	BRANCH	CITY
104	PETER	26	CSE	DELHI

### 3. Write SQL statement to get below output

ROLLNO	NAME	AGE	BRANCH	CITY
104	PETER	26	CSE	DELHI
107	BABU	23	MSC	RAMPUR

### 4. Write SQL statement to get below output

ROLLNO	NAME	AGE	BRANCH	CITY
103	RANI	33	MSC	CHENNAL
104	PETER	26	CSE	DELHI

5. Write SQL statement to get below output (Add DOB column)

SQL staten	TETT CO B	AGE	BRANCH	CITY	DOB
ROLLNO	NAIVIE	22	CSE	MUMBAI	100
101	ANU	21	ECE	DELHI	
102	RAJU	33	MSC	CHENNAI	
103	RANI	26	CSE	DELHI	
104	PETER	22	CSE	NOIDA	
105	SEETHA	22	ECE	JAIPUR	
106	MANI	23	MSC	RAMPUR	
107	BABU	20			

6. Write SQL statement to get below output (Add DOB column)

6. Write S	QL statement	to get bei	BRANCH	CITY	DOB
ROLLNO	NAME	AGE	DIVALLE	MUMBAI	
101	ANU	22	CSE ECE	DELHI	26-01-2000
102	RAJU	21	MSC	CHENNAI	
103	RANI	33	CSE	DELHI	
104	PETER	26	CSE	NOIDA	
105	SEETHA	22	ECE	JAIPUR	
106	MANI	23	MSC	RAMPUR	
107	BABU	23			

Question 2:

Table : Customers

			For all	Address	City	State	zipcode
Cus_id	Fname	Lname	Email			VA	22121
1	geetha	Washington	gwashing@usa.gov	1 rani st	Vernon		2160
	-		jadams@usa.gov	2 raja st	Quincy	MA	2169
2	john	Adams			Charlotte	VA	22902
3	thomas	Jeffryson	tjeffryson@usa.gov	3 vel st	Charlotte		22960
4	iames	Madison	jmadison@usa.gov	4 kambu st	Orange	VA	
5	james	Mongre	jmongre@usa.gov	5 north st	charlotte	VA	22902

Table : Orders

Ordered	Order_date	Amount	Cus_id
1	7-4-1776	234.56	1
2	8-14-1760	78.5	3
3	5-23-1784	124	2
4	9-3-1790	65.5	3
5	7-21-1795	25.5	10
6	11-27-1787	14.4	9

### 7. Write SQL statement to get below output

Fname	Lname	Order_date	Order amanus
geetha	Washington	7-4-1776	Order_amount
john	Adams		234.56
thomas		5-23-1784	124.00
	Jeffryson	8-14-1760	78.50
thomas	Jeffryson	9-3-1790	65.50

# 8. Write SQL statement to get below output

Fname	Lname	Order_date	Order_amount
geetha	Washington	7-4-1776	234.56
john	Adams	5-23-1784	124.00
thomas	Jeffryson	8-14-1760	78.50
thomas	Jeffryson	9-3-1790	65.50
james	Madison	Null	Null
james	Mongre	Null	Null

## 9. Write SQL statement to get below output

-	Lname	Order_date	Order_amount
name	Washington	7-4-1776	234.56
geetha	Jeffryson	8-14-1760	78.50
thomas	Adams	5-23-1784	124.00
john	Jeffryson	9-3-1790	65.50
thomas		7-21-1795	25.5
Null	Null	11-27-1787	14.4
Null	Null	11-27 1707	

## 10. Write SQL statement to get below output

10. Write	SQL statement to get bei	Order_date	Order_amount
name	Lname		234.56
	Washington	7-4-1776	78.50
geetha	Jeffryson	8-14-1760	
homas		5-23-1784	124.00
ohn	Adams	9-3-1790	65.50
thomas	Jeffryson		25.5
	Null	7-21-1795	14.4
Null	Null	11-27-1787	
Null		Null	Null
James	Madison	Null	Null
James	Mongre	IVOII	

- 11. Write a SQL statement to delete the ONLY data inside a customers table
- 12. Write a SQL statement to remove customers table from existing database

### Question 3:

### Table: supplier

Idnic. sept	
	Supplier_name
Supplier_id	Microsoft
1000	Oracle
2000	Apple
3000	Samsung
4000	

### Table: orders

	Order_date	Supplier_id
Order_id	1-aug-15	2000
1	1-aug-15	6000
2	2-aug-15	7000
3	3-aug-15	8000
4		

# 13. Write SQL statement to get below output

1000
2000
2000
3000
4000
6000
7000
8000

### 14. Write SQL statement to get below output

1000
2000
3000
4000
6000
7000
8000

#### Question 4:

#### Table: employee

ADDRESS	SALARY
AHMEDADAD	2000
DELHI	1500
KOTA	2000
MUMBAI	6500
	8500
	10000
	AHMEDADAD DELHI

# 15. Write SQL statement to get below output

NAME	output
HARNIS	COL
KAUSIK	SALARY
KOMAL	8500
MUFFY	8500
RAMESH	4500
	10000
	3500

1. Consider the insurance database given below. The primary keys are made bold and the data types are specified.

PERSON( driver\_id:string, name:string, address:string)

CAR( regno:string, model:string, year:int)

ACCIDENT( report\_number:int , accd\_date:date , location:string )

OWNS( driver\_id:string , regno:string )

PARTICIPATED( driver\_id:string, regno:string, report\_number:int, damage\_amount:int)

1)Create the above tables by properly specifying the primary keys and foreign keys.

2)Enter at least five tuples for each relation.

3)Demonstrate how you

a. Update the damage amount for the car with specific regno in the accident with report number 12 to 25000.

b.Add a new accident to the database.

4)Find the total number of people who owned cars that were involved in accidents in the year 2008.

5)Find the number of accidents in which cars belonging to a specific model were involved.

2. Consider the following relations for a order processing database application in a company.

CUSTOMER( custno:int, cname:string, city:string)

ORDER( orderno:int, odate:date, custno:int, ord\_amt:int)

ORDER\_ITEM( orderno:int , itemno:int , quantity:int )

ITEM( itemno:int, unitprice:int)

SHIPMENT( orderno:int, warehouseno:int, ship\_date:date)

WAREHOUSE( warehouseno:int, city:string)

1)Create the above tables by properly specifying the primary keys and foreign keys.

2)Enter at least five tuples for each relation.

3)Produce a listing: custname, No\_of\_orders, Avg\_order\_amount, where the middle column is the total number of orders by the customer and the last column is the average order amount for that customer.

4)List the orderno for orders that were shipped from all the warehouses that the company has

in a specific city.

5)Demonstrate the deletion of an item from the ITEM table and demonstrate a method of handling the rows in the ORDER\_ITEM table that contains this particular item.

3. Consider the following database of student enrollment in courses and books adopted for that course.

STUDENT( regno:string, name:string, major:string, bdate:date)

COURSE( courseno:int, cname:string, dept:string)

ENROLL( regno:string, courseno:int, sem:int, marks:int)

BOOK\_ADOPTION( courseno:int, sem:int, book\_isbn:int)

TEXT(book\_isbn:int, book\_title:string, publisher:string, author:string)

1)Create the above tables by properly specifying the primary keys and foreign keys.

2)Enter atleast five tuples for each relation.

3)Demonstrate how you add a new text book to the database and make this book to be adopted by some department.

4)Produce a list of text books (includes courseno, book\_isbn, book\_title) in the

alphabetical order for courses offered by the 'CS' department that use more than two books.

5)List any department that has all its books published by a specific publisher.

4. The following are maintained by a book dealer.

AUTHOR( author\_id:int, name:string, city:string, country:string) PUBLISHER( publisher\_id:int, name:string, city:string, country:string)

PUBLISHER( publisher\_id:int, title:string, author\_id:int, publisher\_id:int, category\_id:int, CATALOG( book\_id:int, title:string, author\_id:int, publisher\_id:int, category\_id:int,

year:int, price:int)

CATEGORY( category\_id:int, description:string )

ORDER\_DETAILS( order\_no:int, book\_id:int, quantity:int) 1)Create the above tables by properly specifying the primary keys and foreign keys.

2)Enter at least five tuples for each relation.

3) Give the details of the authors who have 2 or more books in the catalog and the price of the books is greater than the average price of the books in the catalog and the year of publication is after 2000.

4) Find the author of the book that has maximum sales.

- 5)Demonstrate how you increase the price of books published by a specific publisher by 10%.
- 5. Consider the following database for a banking enterprise.

BRANCH(branch\_name:string, branch city:string, assets:real)

ACCOUNT(accno:int, branch name:string, balance:real)

DEPOSITOR( customer\_name:string, accno:int)

CUSTOMER( customer name:string, customer street:string, customer city:string)

LOAN (loan number: int, branch name: string, amount: real)

BORROWER( customer name: string, loan number: int )

1)Create the above tables by properly specifying the primary keys and foreign keys.

2)Enter at least five tuples for each relation.

- 3) Find all the customers who have at least two accounts at the main branch.
- 4) Find all the customers who have an account at all the branches located in a specific city.
- 5)Demonstrate how you delete all account tuples at every branch located in a specific city.

### 6. Consider the schema for Movie Database:

ACTOR (Act id, Act Name, Act Gender)

DIRECTOR (Dir id, Dir Name, Dir Phone)

MOVIES (Mov\_id, Mov\_Title, Mov\_Year, Mov\_Lang, Dir\_id)

MOVIE CAST (Act\_id, Mov\_id, Role)

RATING (Mov id, Rev Stars)

Write SQL queries to

- 1. List the titles of all movies directed by 'Hitchcock'.
- 2. Find the movie names where one or more actors acted in two or more movies. 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN
- 4. Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the result by movie title. 5. Update rating of all movies directed by 'Steven Spielberg' to 5.

DATABASE SYSTEMS LABORATORY

MODEL LAB - 1

313417

TORTHON TO PROPERTY

MAN

Table: Student

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	ROLLNO	NAME	AGE	BRANCH	CITY	
	101	ANU	22	CSE	MUMBAI	
	102	PAJU	00 21 and	ECE MA	DECHI	
	103	PAN1	33	MSC	CHENNAL	
	104	PETER	26	A CSEDIMONA	DELHI	
	105	SEETHA	22	CSE	NOIDA	
	106	MANI	22	ECE	JAIPUR	
	107	BABU	23	use	RAMPUR.	
				1 miles	a - midal	

- 1. Select \* from Student where city = 'DELHI';
- 2. Select & from Student where city = 'DEIHI' and
  Branch = 'ESE';
- 3. Select \* trom Student where age between 23 and 26;
- 4. Select \* From Student where are petween 26 and 33;
- 5. alter table Student add column DOB dati(20);
- 6. updati table Student set DOB = 26-01-2000

  where name = 'RAJU';

2)	table:	customers	PARTENAS.	DAMATACL		774	
			1-981 190	UM	1	I Donne	T
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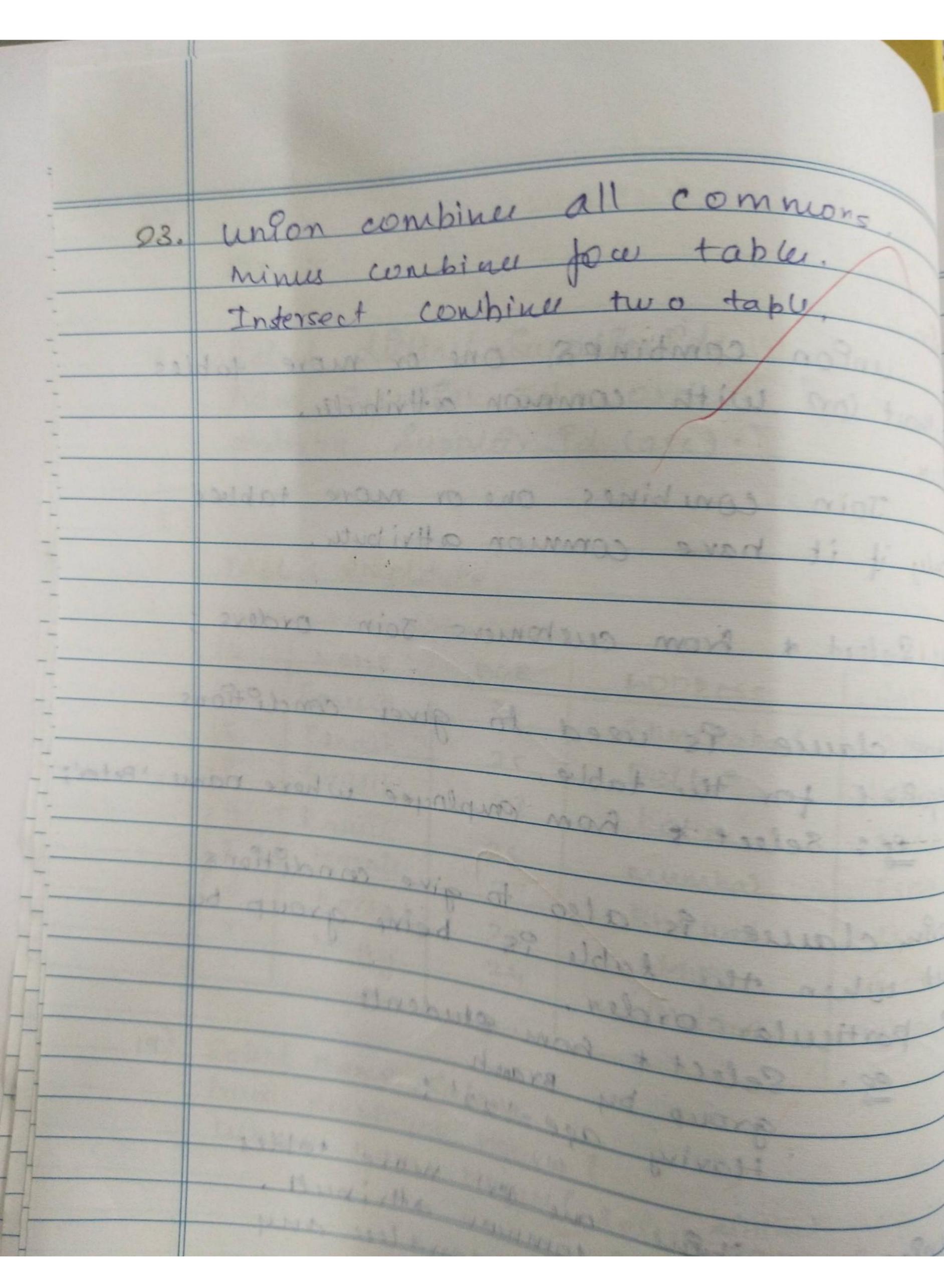
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	2	8-14-1760	124	2
	3	9-3-1790	65.5	30
	4	7-21-1795	25-5	10
	5	11-27-1787	14.4	1 1
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N	Yarry.				
18)	Select détinct Suppler Pdç  Aom Suppler Join Order  orderby Suppler Pd (asc);				
5)	Table: employee.				
	10	NAME	AGE	ADDRESS	SACARY
	1	Rancesh	32	Ahmedabad	2000
	2	Rancesh	25	Delhi	0000
	3	kausik	23	kota	2000
	4	kausik	25	numbai	6500
	5	Harnie	27	Bnopal	8500
	6	komaj	22	112	400
	7	nuffy	24	indore	10000
,				11-140-1	1
	nom	t name, s employed exe name	e MOTIN	& Belect non	10.00

20) Union: uneon combines one or more tables without (on with common attribute. JOIN . Join combines one or more tables only if it have common attributes. eg: Select & from custoniers Join orders; 21) Where clause 9s used to giver condéfions required for the table. eg: Selert & from employee where name: Reter Having clause is also to give conditions but when the table is being group by a particular order. eg. Select & som studente group by Branch Having age - 1221; 22) unea consibére one (ov) mora tables with on without common attribute. union all consider regardles any conditions.



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