

## **DBMS Lab : Section 2**

### **Lab Assignment-2**

**Date Given : 3-2-2020**

#### **Instructions for Submission :**

You will be uploading your assignment in a single word file on LMS. In this word file, paste question assigned to you with answer of the query and screenshot of result.

N.B. : Sample records are given with the tables. You may insert more records as per the need.

## Set-1 Customer Billing details

Customers (**customer\_id**, customer\_name, customer\_email, customer\_address, aadharid)

Customer\_address (**customer\_address\_id**, address\_id, address\_type, customer\_id, from\_date, to\_date)

Addresses (**address\_id**, line1, line2, city, zipcode, state, country)

Customer\_phone\_numbers (**phone\_number**, customer\_id, held\_from\_Date, held\_to\_date)

Customer\_phone\_calls(**phone\_call\_id**, customer\_phone\_number, number\_called, call\_duration, call\_date).

TariffPlan (**plan\_id**, plan\_name, rate);

Bill\_details (**bill\_ID**, phone\_call\_id, plan\_id, call\_cost,).

TariffPlan

<b>plan_id</b>	plan_name	Rate
1	Plan399	399
2	Plan499	499
3	Plan250	250

Customers

<b>customer_id</b>	customer_name	customer_email	Aadharid
1	Akshay Khanna	ak@gmail.com	3423453436667331
2	Rekha Somishetty	rs@hotmail.com	1213566246443456
3	Parag Rawal	parag@yahoo.com	5235762464555692
4	Rahul Pandey	Rahul@yahoo.com	8974453475218001
5	Shweta Sharma	sa@gmail.com	2845699227145645
6	Niraj Sharma	ns@gmail.com	9945699227145645

Addresses (**address\_id**, line1, line2, city, zipcode, state, country)

<b>address_id</b>	line1	line2	city	zipcode	state	country
1	20 Green Park	Pitam Pura	NEW DELHI	110034	NEW DELHI	India
2	Business Development Directorate	Parliament Street	NEW DELHI	110001	NEW DELHI	India
3	4th Floor High View Antilia	Fort Mumbai	Mumbai	400001	Maharashtra	India
4	321 Goyal Park	Drive In Road	Mumbai	400024	Maharashtra	India
5	A-7 5 <sup>th</sup> floor Maple tree	Near Sterling Hospita	Ahmedabad	380055	Gujarat	India

Customer\_address (**customer\_address\_id**, address\_id, address\_type, customer\_id, from\_date, to\_date)

<b>customer_address_id</b>	address_id	address_type	customer_id	from_date	to_date
1	2	billing	1	20-10-2017	null
2	1	residential	1	20-10-2017	null
2	3	billing	2	14-06-2015	13-01-2019

3	4	billing	3	4-02-2017	12-10-2019
4	1	billing	4	14-06-2014	null
5	5	billing	5	14-06-2015	null
6	5	billing	6	14-06-2015	null

Customer\_phone\_numbers (**phone\_number**, customer\_id, held\_from\_Date, held\_to\_date)

<b>phone_number</b>	customer_id	held_from_Date	held_to_date
9856215223	1	20-10-2017	null
9834546766	2	01-06-2017	13-01-2019
9832523331	3	4-02-2017	12-10-2019
9995433221	4	15-12-2016	null
9456623457	5	01-07-2015	null

Customer\_phone\_calls(**phone\_call\_id**,customer\_phone\_number,number\_called,call\_duration,call\_date).

<b>phone_call_id</b>	customer_phone_number	number_called	call_duration	call_date
100	9856215223	6587452123	250002	20-09-2018
101	9995433221	9967833422	240001	20-09-2018
102	9456623457	9545771119	248221	20-09-2018
103	9856215223	9834546778	257855	20-09-2018
104	9456623457	9956655231	200000	20-09-2018
105	9856215223	6587452123	100000	21-09-2018
106	9995433221	9834455523	150000	21-09-2018
107	9456623457	9956655231	80000	21-09-2018
108	9856215223	8900234555	7800	21-09-2018
109	9456623457	9956655231	56421	22-09-2018
110	9995433221	9898012345	64778	22-09-2018

Bill\_details (**bill\_ID**, phone\_call\_id,plan\_id,call\_cost,).

<b>bill_ID</b>	phone_call_id	plan_id	call_cost
1	100	1	0
2	101	2	1000
3	102	3	0
4	103	1	0
5	104	3	0
6	105	1	0
7	106	2	1000
8	107	3	0
9	108	1	0
10	109	3	0
11	110	2	1000

- 1) Display name,email and aadharid of all customers.
- 2) Display name of customers who live in New Delhi.
- 3) Display address of customer named "Akshay Khanna".4
- 4) Display phone numbers which are in use before year 2017.
- 5) Display phone number ,customer name for each customer.
- 6) display count of customers based on city.
- 7) Display Plan name for customer having Phone number =9856215223..
- 8) Display phone call details for each phone number
- 9) Display Customer name,address whose aadhar id is 2845699227145645.
- 10) Display customer details having same billing address.
- 11) Select phone numbers,customer name where held\_to\_date is not null.
- 12) Display phone numbers who has called maximum number of times.
- 13) Display details (name,aadhar,address) of customer having type residential.
- 14) Display call cost ,plan name,number called for phone number 9995433221.
- 15) Display bill details like customer name,plan name ,call cost, number called for customer living in Gujarat.
- 16) Display plan name which is least subscribed by customers.
- 17) Display left outer join of Customer\_phone\_numbers and Customer\_phone\_calls.
- 18) Display right outer join of Customer\_phone\_numbers and Customer\_phone\_calls.
- 19) Display customer name, phone number who have subscribed minimum amount plan.
- 20) Display pair of customers who live in same city.
- 21) Display inner join of customer, addresses, customer address.
- 22) Display total of call cost+rentals for each phone number.
- 23) Display total of call duration for each phone number.
- 24) Display union of Customer\_phone\_numbers and Customer\_phone\_calls.
- 25) Display intersection of Customer\_phone\_numbers and Customer\_phone\_calls.
- 26) Display customername, phonenumber, city, state in ascending order of city.
- 27) Display phone number which is called maximum time.
- 28) Display bill details for each phone number
- 29) Select second maximum call duration from phone calls.
- 30) Display details of customer with longest name.

## Set-2 Inventory Management

Product(**product\_id**,product\_name,product\_brand,category\_name,product\_price,product\_supplier)

Brand(**brand\_id**,brand\_name)

Supplier(**supplier\_id**,supplier\_name,supplier\_address,supplier\_email,supplier\_phone)

Category(**category\_type\_id**,category\_name)

Stock(**stock\_product\_id**, product\_quantity).

Brand(brand\_id,brand\_name)

Brand_id	Brand_name
1	Rtrends
2	Titan
3	Levis
4	Indigo

Category(category\_type\_id,category\_name)

Category_type_id	Category_name
1	women
2	men
3	kids

Supplier(supplier\_id,supplier\_name,supplier\_address,supplier\_email,supplier\_phone)

supplier_id	supplier_name	supplier_address	supplier_email	supplier_phone	Supplier_status
1	S1	A32 Hara Street Ludhiana	S1@xyz.com	6989978767	active
2	S2	First Floor Safal market Ahmedabad	S2@xyz.com	9578888868	active
3	S3	Shop 450 Main Market New Delhi	S3@xyz.com	8943753545	active
4	S4	F-5 Gandhi Market Jalandhar	S4@xyz.com	7899786642	inactive

Product(product\_id,product\_name,product\_brand,category\_type\_id,product\_price,product\_supplier)

product_id	product_name	product_brand	category_type_id	product_price	Supplier_id
1	Watches	2	1	7000	1
2	Ethnic wear	1	1	1000	2
3	Jeans	3	2	1000	1
4	Shirts	3	2	1500	2
5	Shoes	3	2	1500	3
6	Kids Wear	1	3	2000	1

Stock (stock\_product\_id, product\_quantity).

stock_product_id	product_quantity	Update_date
1	200	null
2	1000	null
3	1500	null
4	2000	null
5	1000	null
6	3000	null

1. Display product\_name and product quantity for each product
2. Display details of supplier S2.
3. Display supplier details who supply products for brand "Aurelia".
4. Display the total quantity of brand Levis.
5. Display address,email and phone details of all suppliers.
6. Display category details for each brand.
7. Calculate total price for each product.
8. Display brand name having products for men and kids.
9. Display product details supplied by supplier S1.
10. Display the brand ,product name ,product quantity,product price for "ethnic wear".
11. Display details of supplier who supply all category type products.
12. Display details of suppliers from in New Delhi.
13. Display product details with longest product name.
14. Display product name with minimum quantity.
15. Display total stock value available along with total stock quantity.
16. Display left outer join of Supplier and Product table.
17. Display right outer join of Product and Brand table.
18. Display product names with same product price.
19. Display product name with second highest product price.
20. Display product name ,product quantity,product price in ascending order of price and descending order of quantity.
21. Display supplier details who supply more than 2 products.
22. Display inner join of brand, category, product and supplier.
23. Display union of brand and product. (Use "union" operator)
24. Display intersection of supplier and product. ((Use "intersect" operator)
25. Display products supplied by various brands.
26. Select brand which is not supplied by any supplier.
27. Display suppliers who supply women or kids wear.
28. Display total stock quantity based on category type.
29. Display count of suppliers brand wise.
30. Display product name with maximum quantity.

### Set-3     Airline System

Aircraft(**aircraft\_id**,aircraft\_number,capacity,mfd\_by,Mdf\_On)

Route(**route\_id**,source,destination)

Airfare(**airfare\_id**,route\_id,fare)

Flight\_Schedule(**FS\_id**,flightdate,departure,arrival,aircraft\_id,net\_fare);

Passengers(**passenger\_id**,Name,Address,Age,Nationality,Contact\_no)

Transactions(**ts\_id**,bookingdate,departure\_date,passenger\_id,fs\_id,fare,discount);

Aircraft(aircraft\_id,aircraft\_number,capacity,mfd\_by,Mdf\_On)

aircraft_id	aircraft_number	capacity	mfd_by	Mdf_On
1	ATR 72-500	75	Alenia aeronotica	23-04-1998
2	LTR 75-600	100	Luftansa aero	15-08-2001
3	ATR 33-700	150	Alenia Aeronotica	01-09-2015
4	GAIR-500	90	Deccan Aero	20-09-2009

Route(route\_id,source,destination)

route_id	source	destination
1	Kathmandu	Dubai
2	Dubai	New Delhi
3	New Delhi	Kathmandu

Airfare(airfare\_id,route\_id,fare)

airfare_id	route_id	fare
1	1	2000
2	2	3000
3	3	1500

Flight\_Schedule(FS\_id,flightdate,departure,arrival,aircraft\_number,net\_fare);

FS_id	flightdate	departure	arrival	aircraft_number	net_fare
1	January 23,2012	23:20	1:20	1	1
2	January 24,2012	11:00	13:30	3	2
3	January 24,2012	5:00	6:20	2	3
4	January 25,2012	11:30	3:30	2	1
5	January 26,2012	11:00	13:30	1	2

Passengers(PsId,Name,Address,Age,Nationality,Contact\_no)

Passenger_id	Name	Address	Age	Nationality	Contact_no
1	Sameer Sharma	AlapNagar-39 KTM Nepal	33	Nepalese	6883534535
2	Rangnathan Kumar	Sector 1 Chandigarh India	24	Indian	9834244451
3	Surekha Rai	Poddar Heights New Delhi India	28	Indian	9234432434

4	Bishnu Bathaharya	Kalikasthan, Dillibazar 430 Kathmandu	45	Nepalese	9987734444
5	Krishna Ahal	Triveni Park- 78 Shimla	67	Indian	8897477477

Transactions(ts\_id,bookingdate,departure\_date,passenger\_id,fs\_id,fare);

ts_id	bookingdate	departure_date	passenger_id	fs_id	fare	discount
1	8december- 12,2011	January 23,2012	1	1	2100	0
2	December 30,2011	January 23,2012	2	1	1800	200
3	January 1 ,2012	January 24,2012	3	2	3100	0
4	December 15 ,2011	January 24,2012	4	3	1600	0
5	December 30 ,2011	January 25,2012	5	4	2000	0
6	8ecember- 12,2011	January 26,2012	1	5	2500	500

1. Display aircrafts manufactured by "Alenia Aeronotica".
2. Display flight details for route Kathmandu to Dubai.
3. Display total of transactions for flight scheduled on January 23,2012.
4. Display passenger details in age range of 20 to 40.
5. Display oldest manufactured aircraft.
6. Display count of passengers based on nationality.
7. Display transaction details in month of January 2012 based on booking date.
8. Display passenger details having age more than 60 years.
9. Display passenger details travelling from New Delhi to Kathmandu.
10. Display fare details for each route along with source and destination.
11. Display aircraft number which is scheduled on January 23,2012.
12. Display aircraft number and its mfg date with minimum capacity.
13. Display route and flight details with maximum fare.
14. Display passengers details in ascending order of age.
15. Display passenger details whose name is longest.
16. Display flight details for which no booking is done.
17. Display flight number and details with second highest capacity.
18. Display flight schedule with maximum bookings.
19. Display left outer join of Flight\_Schedule and transactions.
20. Display right outer join of passengers and transactions.
21. Display pair of passengers with same nationality.
22. Display inner join of aircraft, passengers,flight\_schedule and transactions.
23. Display passenger details ,route details travelling on January 24,2012.
24. Display union of Flight\_Schedule and transactions.
25. Display intersection of aircraft and flight\_schedule.



26. Display total number of passengers travelling on same schedule.
27. Display passenger details in ascending order of booking dates.
28. Display the fare for Dubai to New Delhi.
29. Display passengers details who are given discount.
30. Display passenger details and fare charged to each in descending order of net fare.

## Set-4 Project Management

Employees(**employee\_id**,employeeename,role)

Project(**project\_id**,project\_name,start\_date,budget,projectmanager\_id,status\_id,totalhours)

Team(**emp\_id**,project\_id)

Task(**task\_id**,task\_name,employee\_id,project\_id,totalhours,status\_id)

Proj\_status(**id**,status)

Task\_status(**id**,status)

Proj\_status(id,status)

Proj_status_id	Status
1	active
2	inactive

Task\_status (id,status)

Id	Status
1	active
2	completed

Employees(employee\_id,employeeename,role)

employee_id	employeeename	role
1	Rakesh Sharma	ProjectManager
2	Diya Mishra	Member
3	Jaimin Dave	Member
4	Devang Jain	ProjectManager
5	Aarohi Shah	Member
6	Hetarsh Sanghi	Member
7	Kanak Jha	Member
8	Nirmal Joshi	Member

Project(project\_id,project\_name,start\_date,budget,projectmanager\_id,status\_id,totalhours)

project_id	project_name	start_date	budget	projectmanager_id	status_id	totalhours
1	Menatel	12-nov-2017	50000	1	1	700
2	Ozone	1-june-2018	30000	4	1	200
3	Secbill	1-Aug-2019	15000	1	1	400
4	Leandesk	2-Apr-2018	40000	4	2	100

Team(emp\_id,project\_id)

emp_id	project_id
1	1
2	1
3	1
4	2
5	2
6	2
3	2
5	3

4	4
5	4
2	4
6	3
3	3

Task(task\_id,task\_name,employee\_id,project\_id,totalhours,status\_id)

task_id	task_name	Employee_id	Project_id	Totalhours	status_id	instructions
1	Mena_t1	2	1	8	1	
2	Oz_t1	5	2	6	2	
3	Sec_t1	5	3	12	1	
4	Lean_t1	2	4	12	2	
5	Mena_t2	3	1	5	1	
6	Oz_t2	3	2	7	2	
7	Sec_t2	6	3	15	1	

- 1) Display projects details which are in active state.
- 2) Display task details which are completed.
- 3) Display name of project manager for project "Menatel".
- 4) Display number of tasks project wise.
- 5) List the projects in which "Jaimin Dave" is involved.
- 6) Display project name and respective project managers.
- 7) Display count of project members for each project.
- 8) Display projects started before 1-july-2018 and are in active state.
- 9) Display project details having budget of more than 20000.
- 10) Display employee names involved in project "Ozone".
- 11) Display project with highest number of project members.
- 12) Display employees who are involved in more than 1 project.
- 13) Display tasks of projects with maximum budget.
- 14) Display count of task assigned to each employee.
- 15) Display project details with second highest budget.
- 16) Display project wise total hours of tasks.
- 17) Display left outer join of Team and task.
- 18) Display right outer join of project and task.
- 19) Display inner join of employees , project and team.
- 20) Display count of active tasks for each project.
- 21) Display project name ,start date ,budget,project manager in ascending order of budget and descending order of hours.
- 22) Display employeename by union of Employees and team
- 23) Display employeename by intersect of employees and team.
- 24) Display pair of team members in same project.
- 25) Display total hours of task employee wise.
- 26) Display employees whose name start with Letter 'S'.
- 27) Display project details, project manager details where project status is inactive.
- 28) Display employee name with least number of task assigned.
- 29) Display employees not assigned any project.
- 30) Display total of total hours of all projects.

## Set-5 Online bookstore

Customer(**cid**,firstname,lastname,address,city,state,zipcode)

Book(**book\_id**,title,description)

Author(**author\_id**,first\_name,last\_name,street,city)

Book\_author(**book\_id**,**author\_id**)

Order(**orderid**,order\_date,customer\_id,order\_status\_id)

Order\_status(**id**,name)

Order\_item(**book\_id**,**order\_id**,quantity)

Customer(cid,firstname,lastname,address,city,state,zipcode)

cid	firstname	Lastname	Address	city	State	zipcode
1	Richa	Sinha	39 Pamira	Ahmedabad	Gujarat	380054
2	Tipen	Jha	32 Sky Park	Mumbai	Maharashtra	402254
3	Arvind	Tike	Suruchi Sector 5	Chandigarh	Punjab	569752
4	Chetan	Shah	56 Gurukul Park	Ahmedabad	Gujarat	380056
5	Girja	Lodhi	60 FirstView Antilia	Indore	Madhya Pradesh	698115

Book(book\_id,title,description)

book_id	Title	description
1	Wings of fire	Autobiography India space missions
2	The Alchemist	Adventure,fantasy
3	Harry Potter and the Philosopher's Stone	Fictional
4	Pride and Prejudice	Fictional
5	Rich Dad Poor Dad	Self-help,financial management

Author(author\_id,first\_name,last\_name,street,city)

author_id	first_name	last_name	street	city
1	Dr APJ Abdul	Kalam	Mosque Street	Tamilnadu India
2	Jane	Austen	Chawton Cottage	Hampshire England
3	J K	Rowling	Killiechassie Estate	Hampshire England
4	Paulo	Coelho	Rio de Janeiro	Rio de Janeiro brazil
5	Robert	Kiyosaki	Phoenix	Arizona US

Book\_author(book\_id,author\_id)

Book_id	Author_id
1	1
2	4
3	3
4	2
5	5

Order\_status(id,name)

Id	Name
1	Placed

2	Processing
3	Delivered

Order(orderid,order\_date,customer\_id,order\_status\_id)

Orderid	Order_date	Customer_id	Order_status_id
1	April 24 2018	1	2
2	January 21 2018	2	3
3	April 21 2018	3	3
4	May 1 2018	2	2
5	April 30 2018	4	2
6	April 28 2018	5	3

Order\_item(book\_id,order\_id,quantity)

order_id	book_id	quantity
1	1	1
1	2	1
2	4	2
3	1	1
4	3	1
4	4	1
5	3	2
6	4	1

- 1) Display books with genre "fictional".
- 2) Display author details of book "Pride and Prejudice".
- 3) Display count of orders with status "delivered".
- 4) Display authors living in same city.
- 5) Display total of quantity ordered for "Harry Potter and the Philosopher's Stone".
- 6) Display count of books based on genre.
- 7) Display orders in ascending order of date.
- 8) Display details of author "Paulo Coelho".
- 9) Display number of order from city Ahmedabad.
- 10) Display order details of customer "Arvind Tike".
- 11) Display book name and author details with longest book title.
- 12) Display customer details in ascending order of city.
- 13) Display orders placed before April 30 2018.
- 14) Display bookname written by "Dr APJ Abdul Kalam".
- 15) Display order wise total of quantity.
- 16) Display order status wise count of orders.
- 17) Display order and customer details with second highest quantity.
- 18) Display left outer join of Book\_author and order\_item.
- 19) Display right outer join of book and order\_item.
- 20) Display inner join of customer,book,order and order\_item.
- 21) Display pair of customers in same city.
- 22) Display customers details who have ordered more than 1 time.
- 23) Display union of order\_status and order.

- 24) Display intersect of order\_status and order.
- 25) Display order details where total ordered quantity is greater than 1.
- 26) Display customers whose name contain 'Sinha'.
- 27) Display total number of authors in each city.
- 28) Display book name and corresponding author details.
- 29) Display book wise ordered quantity and order status is processing.
- 30) Display book details which is in highest demand.