GOVERNMENT POLYTECHNIC

GULZARBAGH, PATNA - 800 007

BRANCH : CSE

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SUBJECT : Database Management System (LAB)-203[illegible]

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INDEX

Sr. No.	Experiment Description	~~Experiment Date~~ Page no.	Submission Date	Remarks / Signature
0.1	Exercise on select command	01-03		
02	Exercise on Quering the table using clauses like WHERE, ORDER, IN, AND, OR, NOT.	04-07		
03	Exercise on set operators	08-09	7/Dec/2022	
04.	Exercise on JOINS	10-12		
05.	Exercise on creation and dropping of Database	12-13		

CLASSMATE
01

1. • Exercise On Select Command •

→ From the following tables write a SQL query to find those orders where the order amount exists between 500 and 2000.

Return ord-no
Purch-amt
Cust-name
City

Or

Based on the suppliers table below, select the unique city values that reside in the state of californea and order the results in descending order by city :

```
CREATE TABLE suppliers
(Supplier-id int NOT NULL,
 Supplier-name char(50) NOT NULL)

 City char (50),
 State char (25),
```

```
CONSTRAINT supplier_PK

PRIMARY Key (supplier_id)
  );

INSERT INTO suppliers
(supplier_id, supplier_name, city, state)
  VALUES
(100, 'Microsoft', 'Redmond', 'Washigton');

INSERT INTO Suppliers
(Supplier_id, supplier_name, city, state)
  VALUES
(300, Electronic Arts', 'Redwood city',
  California');
```

Solution : Output :

~~City~~	
West lake	village
Redwood	city
Mountain	view

Solution :

```
SELECT DISTINCT City
FROM Suppliers
WHERE State =
  'California'

ORDER BY city DESC;
```

The following SELECT statement would select these records from the supplier table.

——x——

2. • Exercise on Quering the table using clauses like WHERE, ORDER, IN, AND, OR, NOT. •

→ Using WHERE clause

SQL code :

```
SELECT employee_id first_
  last_name. department_id
FROM employees
WHERE department_id = 100;
```

Sample table

employee_id	First_name	last_name	email	Phone_no.	job_id
100	Steven	Singh	ABC	515.123.456	AD_PR
101	Swati	Kumari	XYZ	216.410.456	AD_VP
102	Shivangi	Kumari	JKL	139.476.542	AD_JK
103	Vindhya	Brahaman	MNO	143.267.542	PS_JK
104	Abhinav	Yadav	PQR	94.367.428	CSE
105	lex	Austin	STU	54.373.424	ECSE
106	Alexander	Lorentz	VWX	56.834.345	PCS_K
107	Bruce	Greenberg	YZK	601.734.561	IT
108	Valli	Hunold	DEF	701.605.400	IIT

Output	
EMPLOYEE_ID	FIRST NAME
100	Steven
101	Swati
102	Shivangi
103	Vindhya

AGENT_CODE	AGENT_NAME	WORKING_AREA	COMMISION
A012	Swati	Samastpur	.15
A011	Shivangi	New-York	.12
A010	Vindhya	Delhi	.13
A009	Abhinav	America	.11
A008	Ram	Mumbai	.14
A007	Lakham	Kolkata	.15

Movie_id	file	directory
1.	Pirates of the Caribean 4	Rob Marshal
2.	Forgetting Sarah Marshal	Nichola Stoller

Using ORDER clause

To get 'degent-name', 'agent-name', 'working-area' and 'commission' from the 'agents' table

Code :

```
SELECT agent-code, agent-name, working-area,
       Commission;
FROM agent ORDER By agent-code DESC;
```

Sample table (output)
← Re Previous page

Using IN

The following, MY SQL WHERE IN query gives rows where membership-number is either 1, 2 or 3.

```
SELECT * FROM 'members' WHERE
'membership-number' IN
    (1,2,3);
```

Using IN and AND

Roll No.	NAME	ADDRESS	PHONE	AGE
1.	Ram	Delhi	----	18
2.	Shyam	Patna	----	20

If suppose we want to fetch all the records from the student table where age is 18 and ADDRESS is Delhi, then the query will be.

Code :

```
SELECT * FROM Student WHERE Agge = 18 and
    ADDRESS = 'Delhi';
```

OR operator displays the records where either one of the condition's Condition 1 and Condition 2 evaluates true. That is either Condition 1 is True or Condition 2 is true.

Syntax :

```
SELECT * FROM table_name WHERE Condition
```

table_name : name of the table
Condition 1, 2, ... N : 1st Condition & 2nd Condition

We consider a table database to demonstrate AND & OR operators with multiple cases.

— X —

3. • Exercise on SET operators •

→ From the following table write a SQL query to find the sales person who generated the largest and smallest order on each date Return Salesperson_ID, name, order_no, highest on / lowest on order table

Sample table : Salesman

Name	City	Commission	Salesman-ID
Swati	India	0.15	5001
Shivangi	Paris	0.13	5002
Vindhya	London	0.14	5005
Abhinav	Rome	0.11	5006

Sample table : Orders

Ord-no	Purch-amt	Ord-date	Customer_id	Salesman_id
70001	150.5	2018-10-05	3005	5002
7009	270.65	2018-09-10	3001	5001
7002	65.26	2018-08-18	3002	5003
7004	110.5	2018-05-13	3004	5006
7007	948.5	2018-04-11	3008	5009
7005	5760	2018-06-13	3007	5008

Salesman_id	Name	Ord_no.	? Column ?	Ord_date
5001	James	70002	lowest on	22-07-2022
5002	Jhon	70003	lowest on	05-06-2022
5003	Jack	70005	highest on	01-02-2022
5004	Rio	70008	lowest on	03-10-2022
5006	Riya	70007	highest on	04-09-2022
5007	Shivangi	70001	greatest	01-02-2022
5008	Vindhya	70000	lowest on	10-09-2012
5009	Abhinav	70002	lowest off	11-07-2010
50010	Manjeet	70007	highest on	10-05-2005
5011	Shristi	70008	lowest on	12-06-2011
5013	Nisha	70009	lowest on	12-02-2012
5014	Harsh	70005	lowest on	08-02-2022
5012	Ram	70001	highest on	09-01-2023
5015	Shyam	70100	lowest on	04-06-2011
5016	Walter	70001	highest on	05-07-2017
5018	Christ	70010	lowest on	07-06-2022

Code :

```
SELECT a.salesname-id , 'name' , 'ord-no' , 'highest-on',
       ord-date
FROM Salesman-a , orders-b
WHERE a.Salesman-id = b.Salesman-id
 AND  b.Purch-amt =
      (SELECT Max (Purch-amt))
       FROM orders C
       WHERE C.ord-date = b.ord-date )

UNION
 (SELECT a.Salesman-id , name, ord-no, 'lowest-on',
    ord-date)
  FROM Salesman a. orders b
 WHERE a.Salesman-id , b.Salesman-id
 AND b.Purch-amt =
    (SELECT MIN (Purch-amt )
      FROM orders a
      WHERE c.ord-dtate = b.ord-date ))
```

—— x ——

4. Exercise on JOINS

→ From the following tables write a SQL query to find the salesperson and customer who reside in the same city.

Return Salesman. cust-name and city.

Sample table : Salesman

" OR "

From the following table write a SQL query to find the details of an order. Return ord-no, order-date, Purch-amt, Customer name, grade, Salesman, Commission.

Sample table : Customer

Cust-id	Cust-name	City	Grade	Salesman-id
3002	Shyam	~~Indeia~~ Noida	100	5001
3007	Ram	Mumbai	200	5002
3005	Vindhya	Patna	300	5003
3008	Abhinav	Delhi	310	5004
3004	Shivangi	Siwan	200	5005

Ord-no.	Ord-date	Purch-amt	Customer name	Grade	Salesman
7001	2022-07-18	270.65	Nisha	100	Kriti
7002	2022-06-18	65.26	Amarjeet	200	Ritu
7003	2022-07-19	110.50	Riya	300	Kriti
7004	2022-07-18	2400.60	Guddu	100	Mahi
7005	2022-07-19	576.0	Tanvi	150	Sita
7006	2022-08-20	4110.0	Roma	140	Riya
7007	2022-08-19	510.1	Sita	150	Nisha
7008	2022-07-18	61.6	Ram	100	Mitesh
7009	2022-06-17	62.6	Shyam	200	Pranav
7010	2022-09-20	79.9	Abhinav	300	Abhay
7011	2022-10-11	4.9	Shivangi	500	Kia
					Ram

Sample table : orders

Ord_no.	Purch_amt	Ord_date	Customer_id	Salesman_id
70001	150.5	2022-10-08	3005	5002
70002	270.65	2022-09-07	3001	5004
70003	65.26	2022-08-05	3003	5005
70004	110.5	2022-07-06	3002	5001
70005	576.0	2022-06-01	3004	5000

Sample table : Salesman

Salesman_id	Name	City	Commission
5001	Nisha	Delhi	0.15
5002	Prince	Noida	0.19
5003	Pranav	Mumbai	0.11
5004	Vindaya	Patna	0.10
5005	Sarati	Panjja	0.02

Code :

```
SELECT a.ord_no, a.ord_date.
    a.Purch_amt
b.Cust_name As "Customer Name".
    b.grade
C.name As "salesman", c.commission
```

```
    INNER JOIN Customer b
FROM Orders a
    INNER JOIN Customer b
ON a.Customer_id = b.Customer_id
    INNER JOIN Salesman c
ON a.salesman_id = c.Salesman_id;
```

———X———

5. • Exercise on Creation And Dropping of Database •

→ The SQL CREATE DATABASE statement is as follows :

```
CREATE DATABASE Database_name;
```

Also, some database systems require a semicolon at the end of each SQL statement. A semicolon is the standard way to separate each SQL statement in database systems that allow more than one SQL statement to be executed in the same call to the server

Q. Write a SQL statement to Create a table named countries including Colums country_id, Country_name and region_id and make sure that no countries except Italy, India and china will be entered in the table.

→ Sample Solution

Code :

OUTPUT

County_ID	Varchar (2)	Yes	NULL
COUNTRY_NAME	Varchar (40)	Yes	NULL
REGION_ID	Decimal (10·0	Yes	NULL

```
CREATE TABLE IF NOT EXISTS COUNTRIES
(
 COUNTRY_ID  Varchar(2)
 COUNTRY_NAME  Varchar (40)
 CHECK ( COUNTRY_NAME IN ('Italy',
       'India', 'China')),
 REGION_ID  decimal  (10.0)
 );
```

Let's execute the above code in MYSQL 5.6

Command Prompt

Here is the structure of table

MySQL > DESC countries ;

Field	Type	NULL	Key	Default	Extra
COUNTRY_ID	varchar(2)	Yes		NULL	
COUNTRY_NAME	Varchar (10)	Yes		NULL	
REGION_ID	Decimal (10.0)	Yes		NULL	

3 rows in set (0.01) sec)

There, can be any other way to solve this code.

The SQL DROP DATABASE statement is used to drop an existing database in SQL schema.

Syntax :

The basic syntax of the DROP DATABASE would be as shown below:

```
DROP DATABASE test DIS 1 ;
```

Code:

```
CREATE DATABASE
    test DIS1;
SHOW DATABASE ;
DROP DATABASE
    test DIS 1 ;
SHOW DATABASE;
```

Line 4 in the above code is used to delete / drop the test DB 2 database.

> Be careful using this Operation because deleting an existing database would result in complete

loss of information stored in the database

Sample table : agents

AGENT_CODE	AGENT_NAME	WORKING_AREA	COMMISSION	PHONE_NO
A007	Nisha	Banglore	0.15	---
A008	Swati	London	0.14	---
A006	Riya	New York	0.13	---
A004	Ram	Chennai	0.11	---
A005	Shyam	Kolkata	0.12	---
A002	Abhinav	India	0.10	---
A001	Prince	Bihar	0.09	---
			0.08	

Kbirla 17/09/2022

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