SQL ASSIGNMENT

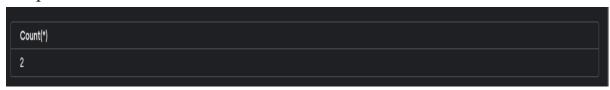
QUERY-1

1. Write a query to fetch the number of employees working in the department 'Admin'.

Code:-

select Count(*) from EmployeeInfoTable where department='Admin';

Output:-



QUERY-2

2. Write a query to retrieve the first four characters of EmpLname from the EmployeeInfo table.

Code:-

SELECT SUBSTRING(EmpLname, 1, 4) FROM EmployeeInfoTable;

Output:-

SUBSTRING(EmpLname,1,4)	
Meth	
Mish	
Diwa	
Kulk	
Каро	

QUERY-3

3. Write q query to find all the employees whose salary is between 50000 to 100000.

CODE:-

select * from EmployeePosition where salary between 50000 and 100000

EmplD	EmpPosition	DateOfJoining	Salary
2	Executive	2022-05-02	75000
3	Manager	2022-05-01	90000
4	Lead	2022-05-02	85000

QUERY-4:

4. Write a query to find the names of employees that begin with 'S'

Code:-

SELECT * FROM EmployeeInfoTable WHERE EmpFname like 'S%'

EmpID Emp	pFname	EmpLname	Department	Project	Address	DOB	Gender
1 San	njay	Metha	HR	Pl	Hyderabad(HYD)	1996-12-01	М
4 Son	nia	Kulkarni	HR	Pl	Hyderabad(HYD)	1992-05-02	F

QUERY-5:-

5. Write a query to fetch top N records order by salary. (ex. top 5 records)

CODE:-

SELECT * FROM EmployeePosition ORDER BY Salary LIMIT 5; OUTPUT:-

EmpID	EmpPosition	DateOfJoining	Salary
2	Executive	2022-05-02	75000
4	Lead	2022-05-02	85000
3	Manager	2022-05-01	90000
5	Executive	2022-05-01	300000
1	Manager	2022-05-01	500000

QUERY-6

6. Write a query to fetch details of all employees excluding the employees with first names, "Sanjay" and "Sonia" from the EmployeeInfo table.

CODE:-

SELECT * FROM EmployeeInfoTable WHERE EmpFname NOT IN ('sanjay','Sonia');

EmpID	EmpFname	EmpLname	Department	Project	Address	DOB	Gender
	Sanjay	Metha	HR	Pl	Hyderabad(HYD)	1996-12-01	М
2	Ananya	Mishra	Admin	P2	Delhi(DEL)	1968-05-02	F
3	Rohan	Diwan	Account	P3	Mumbai(BOM)	1980-01-01	М
5	Ankit	Kapoor	Admin	P2	Delhi(DEL)	1994-07-03	М

QUERY-7

7. Write a query to fetch the department-wise count of employees sorted by department's count in ascending order.

CODE:-

SELECT Department, count(EmpID) AS EmpDeptCount

FROM EmployeeInfoTable GROUP BY Department

ORDER BY EmpDeptCount ASC;

OUTPUT:-

Department	EmpDeptCount
Account	
Admin	2
HR	2

QUERY-8

8) Create indexing for any particular field and show the difference in data fetching before and after indexing

CODE:-

explain analyze select EmpPosition from employeeposition

Before:-

	QUERY PLAN text
1	Seq Scan on employeeposition (cost=0.0014.30 rows=430 width=118) (actual time=0.0070.007 rows=5 loops
2	Planning Time: 0.028 ms
3	Execution Time: 0.016 ms

After:-

CODE:-

1)create index emp_position on employeeposition(empposition);

2)explain analyze select EmpPosition from employeeposition;

	QUERY PLAN text
1	Seq Scan on employeeposition (cost=0.001.05 rows=5 width=118) (actual time=0.0050.007 rows=5 loops
2	Planning Time: 0.036 ms
3	Execution Time: 0.015 ms

ADDITIONAL INFORMATION FOR CREATING TABLE

1. Create table EmployeeInfo Table

Code:-

Create table EmployeeInfoTable (EmpID int Primary Key,EmpFname varchar(50),EmpLname varchar(50),Department varchar(20),Project varchar(20),Address varchar(255),DOB date,Gender varchar(20));

Inserting values in EmployeeInfo

insert into EmployeeInfoTable values

- (1,'Sanjay','Metha','HR','P1','Hyderabad(HYD)','1996-12-01','M'),
- (2,'Ananya','Mishra','Admin','P2','Delhi(DEL)','1968-05-02','F'),
- (3,'Rohan','Diwan','Account','P3','Mumbai(BOM)','1980-01-01','M'),
- (4,'Sonia','Kulkarni','HR','P1','Hyderabad(HYD)','1992-05-02','F'),
- (5,'Ankit','Kapoor','Admin','P2','Delhi(DEL)','1994-07-03','M');

EmpID	EmpFname	EmpLname	Department	Project	Address	DOB	Gender
1	Sanjay	Metha	HR	Pl	Hyderabad(HYD)	1996-12-01	М
2	Ananya	Mishra	Admin	P2	Delhi(DEL)	1968-05-02	F
3	Rohan	Diwan	Account	P3	Mumbai(BOM)	1980-01-01	М
4	Sonia	Kulkarni	HR	Pl	Hyderabad(HYD)	1992-05-02	F
5	Ankit	Kapoor	Admin	P2	Delhi(DEL)	1994-07-03	М

2. Create Table EmployeePosition Table:

Code:-

Create table EmployeePosition (EmpID int primary key,EmpPosition varchar(50),DateOfJoining Date,Salary numeric);

Inserting values in EmployeePosition:

insert into EmployeePosition values(1,'Manager','2022-05-01',500000), (2,'Executive','2022-05-02',75000), (3,'Manager','2022-05-01',90000),

(4,'Lead','2022-05-02',85000),

(5,'Executive','2022-05-01',300000);

Employee Position						
EmpID	EmpPosition	DateOfJoining	Salary			
1	Manager	2022-05-01	500000			
2	Executive	2022-05-02	75000			
3	Manager	2022-05-01	90000			
4	Lead	2022-05-02	85000			
5	Executive	2022-05-01	300000			