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**SE(4A) | 19F-0916**

Database Lab

Sql queries 2

**TASK # 01**

**OVERALL QUERIES**

/\*creating Department Table \*/

Create table DEP

(

DId char(5) primary key,

DName char(10),

);

insert into DEP values('cs101','Comp.Sci');

insert into DEP values('EE102','Elect.Eng');

insert into DEP values('BBA','Business');

/\*creating EMPLOYEE Table \*/

Create table EMP

(

Eid int primary key,

EName char(10),

EAddress varchar(20),

Salary int,

Dno char(5),

Foreign key(Dno) references DEP(DId)

);

/\* Insert Data \*/

insert into EMP values(1,'Ali','FSD',35000,'CS101');

insert into EMP values(2,'Akber','FSD',36000,'CS101');

insert into EMP values(3,'zeeshan','LHR',45000,'EE102');

insert into EMP values(4,'Nauman','FSD',50000,'CS101');

insert into EMP values(5,'Raheem','LHR',40000,'EE102');

insert into EMP values(6,'Kareem','FSD',25000,'CS101');

insert into EMP values(7,'Fahad','LHR',14000,'EE102');

insert into EMP values(8,'Nazir','LHR',25000,'EE102');

insert into EMP values(9,'Rizwan','LHR',38000,'EE102');

insert into EMP values(10,'Mubashir','',8000,'CS101');

insert into EMP values(11,'Hamid','',7000,'EE102');

/\* TASK 1 Queries \*/

/\* 1: Find the average salary of each department. \*/

Select Dno, AVG(Salary) as Average\_Salary

From EMP

Group by Dno;

/\* 2: Find total number of employees working in each department and total salary paid to all employee in the same department. \*/

Select Dno, Sum(Salary) as Total\_Sal, Count(Eid) as Total\_Emp

From EMP

Group by Dno;

/\* 3: Find max salary paid by each department. \*/

Select Dno, Max(Salary) as Max\_Paid\_Sal

From EMP

Group by Dno;

/\* 4: Find the Department number of departments that paid maximum salary to their EMPLOYEEs. \*/

Select Dno, Max(Salary) as Max\_Paid\_Sal

From EMP

Group by Dno;

/\* 5: Find the record of employees whose name contains ‘h’ in their name. \*/

Select \*

From EMP

Where EName Like'%h%';

/\* 6: Find the name of all employees who are not working in any department (hint use is null) \*/

Select EName, EAddress

From EMP

Where EAddress = '';

/\* 7: Find the name of employees who has highest salary in each department. \*/

Select DISTINCT EMP.EName, EMP.Dno

From EMP

where Eid IN (Select Dno,Max(Salary) as Maximum\_Salary

From EMP

Group by Dno,Eid)

Group by EMP.Dno, EMP.EName;

Select EName

From EMP

Where Salary >= ( Select Max(Salary) From Emp)

Group By Dno, EName

/\* 8: Find the record of employee who is earning more than every employee in all department. \*/

Select \*

From EMP

Where Salary >= ( Select Max(Salary) From Emp)

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**TASK # 02**

**OVERALL QUERIES**

Create Table Product

(

Pid int Primary key,

PName char(15) not null,

P\_Desc Varchar(40),

Price int,

Discount char(4),

Uni\_code char(5)

);

insert into Product values(112,'Painter',' Power Painter 15, psi' ,3400,'5%','cs111');

insert into Product values(113,'INK','Power Ink 1/3 osi' ,3100,'4%','cs121');

insert into Product values(114,'Washing Powder','Powder 1/3 osi' ,1100,'4%','cs131');

insert into Product values(115,'Cloth','cloth 1/4 inches' ,3100,'4%','cs131');

insert into Product values(116,'Cloth','cloth 1/2 inches' ,3100,'4%','cs132');

insert into Product values(117,' PVC Pipe','PVC Pipe 3.5 inches' ,1500,'4%','cs141');

insert into Product values(118,'Steel','steel mating 2\*4\*5 matting' ,3100,'4%','cs441');

insert into Product values(119,'Metal Screw','Metal screw 1/2 inches ' ,3100,'4%','cs44');

/\* TASK 2 Queries \*/

/\* STRING FUNCTIONS \*/

/\* 1: Concatenation. \*/

Select CONCAT (Pid, ' ', PName, Price) as CONCATENATION

From Product

/\* 2: Upper and Lower \*/

Select Upper(PName) as Upper\_Case

From Product

Select Lower(PName) as Lower\_Case

From Product

/\* 3: SubString \*/

Select PName, substring (PName , 1 ,5 ) as SubString\_Value

From Product

/\* 4: Length \*/

Select Len(PName) as Length\_of\_Attributes, PName

From Product

/\* 5: Right and Left \*/

Select Right(PName,6) as Right\_Intendation, PName

From Product

Select Left(PName,2) as Left\_Intendation , PName

From Product

/\* 6: RTRIM LTRIM AND TRIM \*/

Select LTRIM(PName) as LEFT\_TRIM, PName

From Product

Select RTRIM(PName) as RIGHT\_TRIM, PName

From Product

Select TRIM(PName) as WHOLE\_TRIM, PName

From Product

/\* 7: Replace Reverse and Replicate \*/

Select Replace(PName,'l','L') as Replaced\_Values, PName

From Product

Select Reverse(PName) as Reversed\_Values, PName

From Product

Select Replicate(PName,2) as Replicated\_Values, PName

From Product

/\* NUMERIC FUNCTIONS \*/

/\* 1: ABSOLUTE VALUE \*/

Select DISTINCT ABS(T.SQRT\_PRICE) as ABS\_VALUE, Price

from Product, (Select SQRT(Price) as SQRT\_PRICE

From Product ) T

/\* 2: ROUND \*/

Select DISTINCT ROUND(T.SQUARE\_ROOT, Price) as ROUND\_VALUE, Price

from Product, (Select SQRT(Price) as SQUARE\_ROOT

From Product ) T

/\* 3: CEILING AND FLOOR \*/

Select CEILING('2.2')

Select FLOOR('2.2')

Select CEILING(T.AVG\_PRICE)

From (Select SQRT(Price) as AVG\_PRICE

From Product ) T

Select FLOOR(T.AVG\_PRICE)

From (Select SQRT(Price) as AVG\_PRICE

From Product ) T

/\* 4: SQRT TAN \*/

Select SQRT(Price) as SQUARE\_ROOT

From Product

Select TAN(Price) as SQUARE\_ROOT

From Product

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