Name: **Dwarkesh Prakash Waingade** **Date:**

Class:MCA-I **Roll No.:57**

Subject:RDBMS

ExperimentNo:1

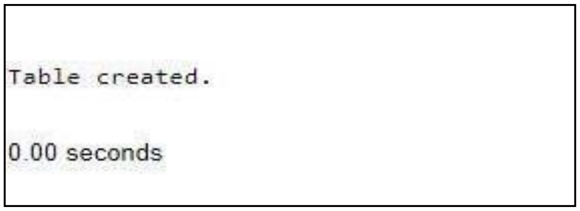
Title:Create table, insert into table,view table.

Query:

A. Create Table:

```
createtableStd (

Stud_idint,

Stud_Namevarchar(20),

Stud_Cityvarchar(20),Stud_Phonenoint,

Stud_Dept varchar(20)

)
```

Output:



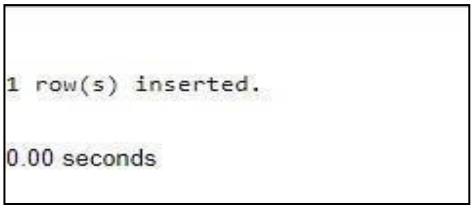
```
Table created.

0.00 seconds
```

Query:

B. Insert:

```
INSERTINTOStd

(Stud_id,Stud_Name,Stud_City,Stud_Phoneno,Stud_Dept)

VALUES

(1,'Suraj','Kolhapur',8807734638,'MCA');


INSERTINTOStd

(Stud_id,Stud_Name,Stud_City,Stud_Phoneno,Stud_Dept)

VALUES

(1,'Suraj','Kolhapur',8807734638,'MCA');

INSERTINTOStd

(Stud_id,Stud_Name,Stud_City,Stud_Phoneno,Stud_Dept)

VALUES

(3,'Omkar','Wai',8807738898,'MCA');

INSERTINTOStd

(Stud_id,Stud_Name,Stud_City,Stud_Phoneno,Stud_Dept)

VALUES

(4,'Sanket','Solapur',8807738548,'MBA');

INSERTINTOStd

(Stud_id,Stud_Name,Stud_City,Stud_Phoneno,Stud_Dept)

VALUES

(5,'Saurabh','Sangli',8807738675,'Msc');
```

Output:



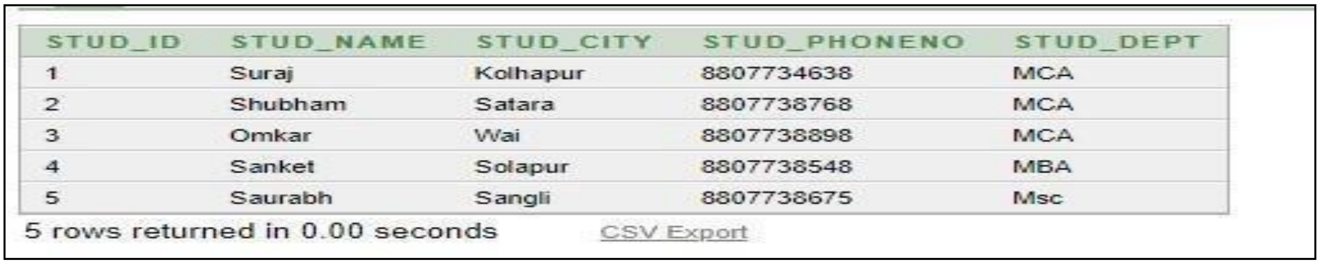
```
1 row(s) inserted.

0.00 seconds
```

Query:

C.View:

select*fromStd;

Output:



STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	MCA
2	Shubham	Satara	8807738768	MCA
3	Omkar	Wai	8807738898	MCA
4	Sanket	Solapur	8807738548	MBA
5	Saurabh	Sangli	8807738675	Msc

5 rows returned in 0.00 seconds

Name: Dwarkesh Prakash Waingade

Date:

Class:MCA-I

Roll No.:57

Subject:RDBMS

ExperimentNo:2

Title:**Tofilterdatafromtable.**

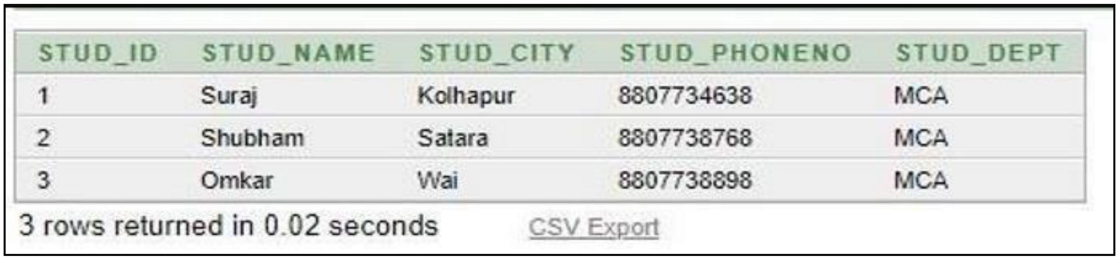
Theory:

Query:

Selectingparticulardepartment:

```
select*fromStdwhere

stud_dept='MCA';
```

Output:

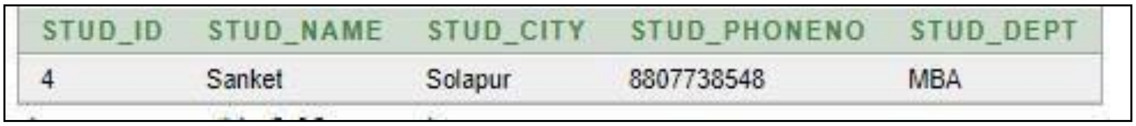


STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	MCA
2	Shubham	Satara	8807738768	MCA
3	Omkar	Wai	8807738898	MCA

3 rows returned in 0.02 seconds

```
select*fromStdwhere

stud_dept='MBA';
```

Output:



STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
4	Sanket	Solapur	8807738548	MBA

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YSPM

Name: Dwarkesh Prakash Waingade **Date:**

Class:MCA-I **Roll No.:57**

Subject:RDBMS

ExperimentNo:3

Title:To sortdatainthetable.

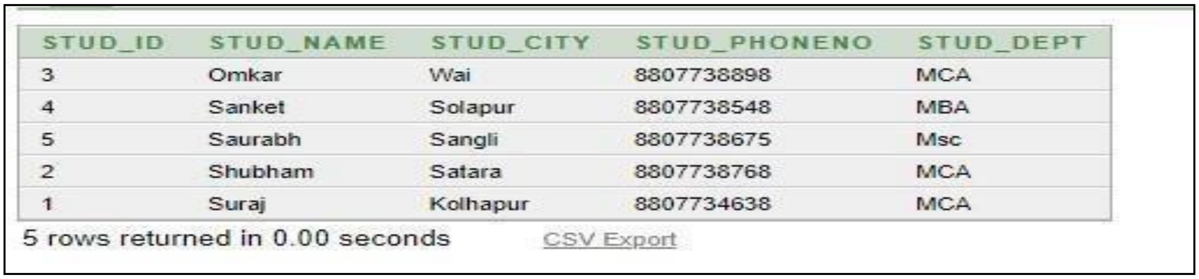
Query:

A. Asending Order.

select*from Std

ORDERBYStud_Name ASC;

Output:



STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
3	Omkar	Wai	8807738898	MCA
4	Sanket	Solapur	8807738548	MBA
5	Saurabh	Sangli	8807738675	Msc
2	Shubham	Satara	8807738768	MCA
1	Suraj	Kolhapur	8807734638	MCA

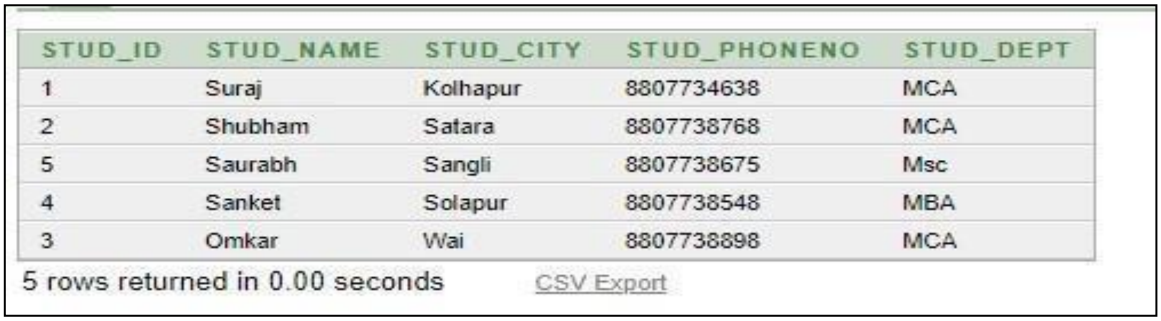
5 rows returned in 0.00 seconds

B. Decendingorder:

select*from Std

ORDERBYStud_NameDESC;

Output:



STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	MCA
2	Shubham	Satara	8807738768	MCA
5	Saurabh	Sangli	8807738675	Msc
4	Sanket	Solapur	8807738548	MBA
3	Omkar	Wai	8807738898	MCA

5 rows returned in 0.00 seconds

FacultyOfMCA

YSPM

Name: Dwarkesh Prakash Waingade **Date:**

Class:MCA-I **Roll No.:57**

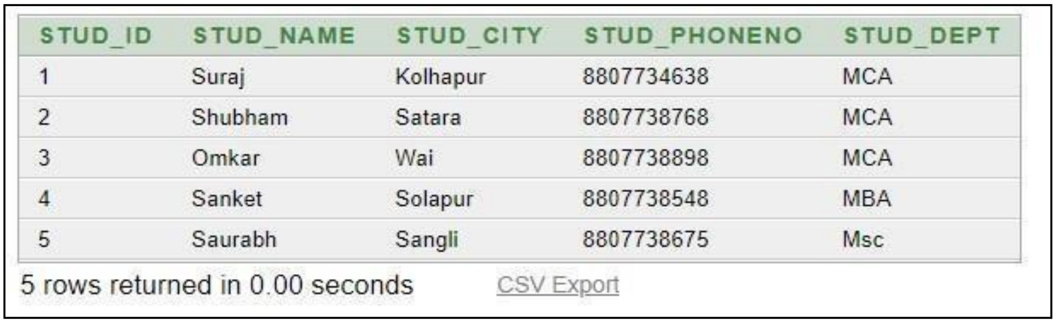
Subject:RDBMS

ExperimentNo:4

<u>Title</u>:Toupdateanddeletecontentsofatable. <u>Query:</u>

select*from Std;

<u>Output:</u>



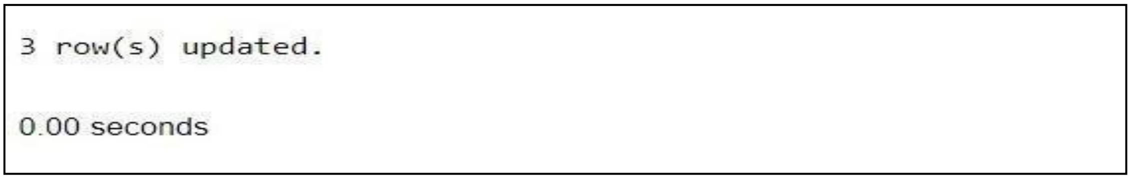
STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	MCA
2	Shubham	Satara	8807738768	MCA
3	Omkar	Wai	8807738898	MCA
4	Sanket	Solapur	8807738548	MBA
5	Saurabh	Sangli	8807738675	Msc

5 rows returned in 0.00 seconds CSV Export

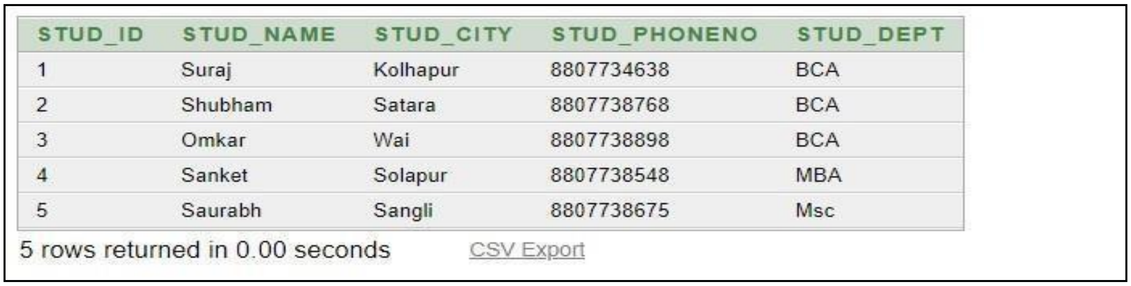
<u>A. Afterupdatingthe table:</u>

updateStdsetStud_Dept='BCA'whereStud_Dept='MCA';

<u>Output:</u>



```
3 row(s) updated.

0.00 seconds
```



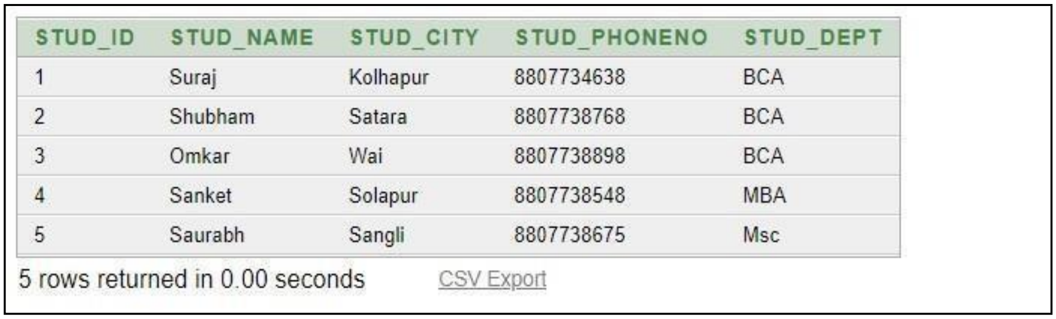
STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	BCA
2	Shubham	Satara	8807738768	BCA
3	Omkar	Wai	8807738898	BCA
4	Sanket	Solapur	8807738548	MBA
5	Saurabh	Sangli	8807738675	Msc

5 rows returned in 0.00 seconds CSV Export

B. Beforedeletingthetable:

select*from Std;

Output:



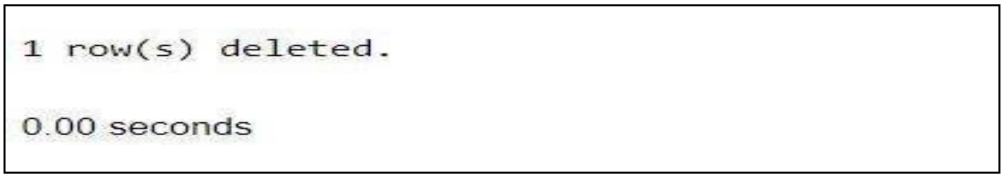
STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	BCA
2	Shubham	Satara	8807738768	BCA
3	Omkar	Wai	8807738898	BCA
4	Sanket	Solapur	8807738548	MBA
5	Saurabh	Sangli	8807738675	Msc

5 rows returned in 0.00 seconds   CSV Export

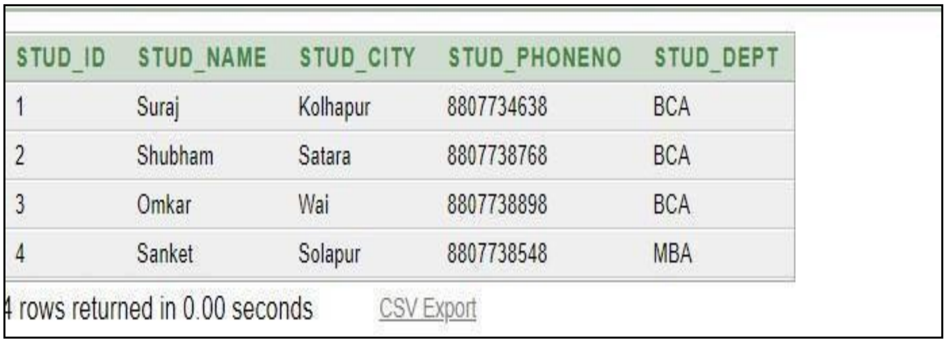
C. AfterDeletingthe table:

deletefromStdwhere Stud_Dept='Msc';

Output:



```
1 row(s) deleted.

0.00 seconds
```



STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	BCA
2	Shubham	Satara	8807738768	BCA
3	Omkar	Wai	8807738898	BCA
4	Sanket	Solapur	8807738548	MBA

4 rows returned in 0.00 seconds   CSV Export

Name: Dwarkesh Prakash Waingade **Date:**

Class:MCA-I **Roll No.:57**

Subject:RDBMS

ExperimentNo:5

Title:Workingwithtables.

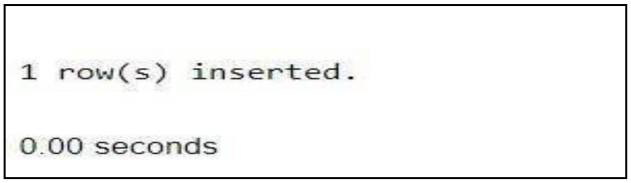
Theory:

Query:

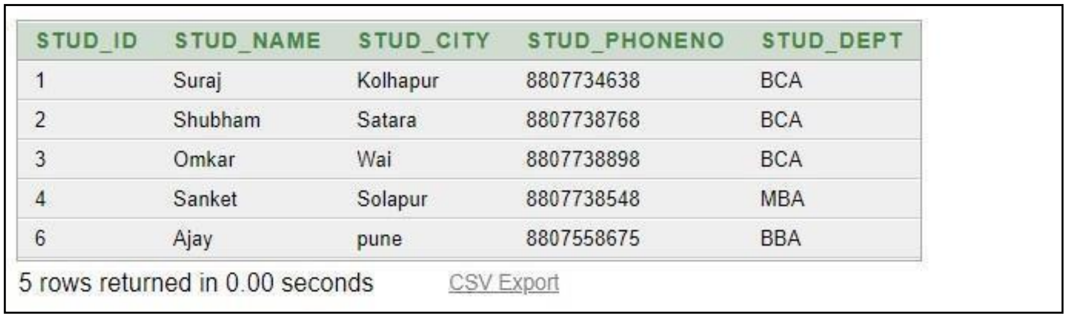
A. Insert:

```
INSERTINTOStd

(Stud_id,Stud_Name,Stud_City,Stud_Phoneno,Stud_Dept)

VALUES

(6,'Ajay','pune',8807558675,'BBA');
```

Output:



```
1 row(s) inserted.

0.00 seconds
```



STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	BCA
2	Shubham	Satara	8807738768	BCA
3	Omkar	Wai	8807738898	BCA
4	Sanket	Solapur	8807738548	MBA
6	Ajay	pune	8807558675	BBA

5 rows returned in 0.00 seconds CSV Export

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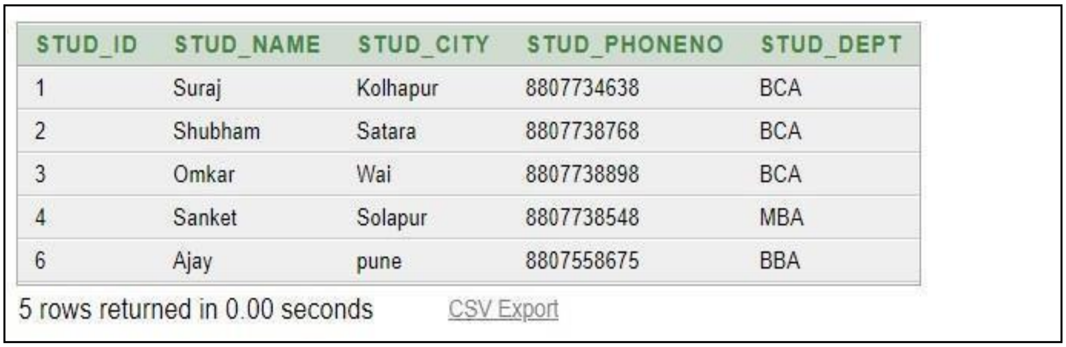
B. Update:

Beforeupdatingthetable:

```
select*from Std;
```

Output:



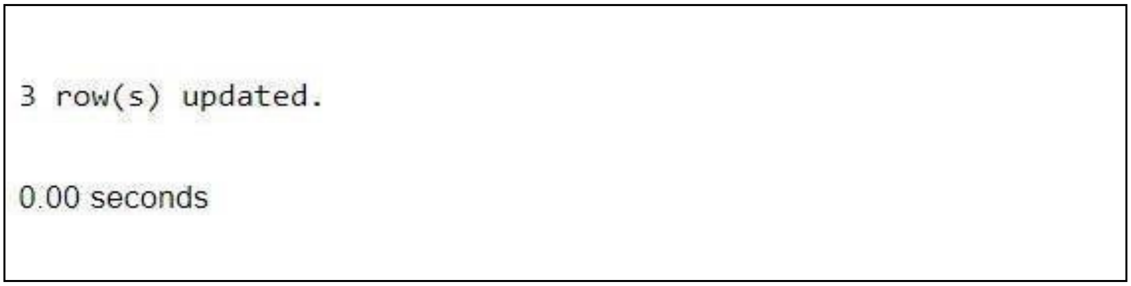
STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	BCA
2	Shubham	Satara	8807738768	BCA
3	Omkar	Wai	8807738898	BCA
4	Sanket	Solapur	8807738548	MBA
6	Ajay	pune	8807558675	BBA

5 rows returned in 0.00 seconds

C. Afterupdatingthe table:

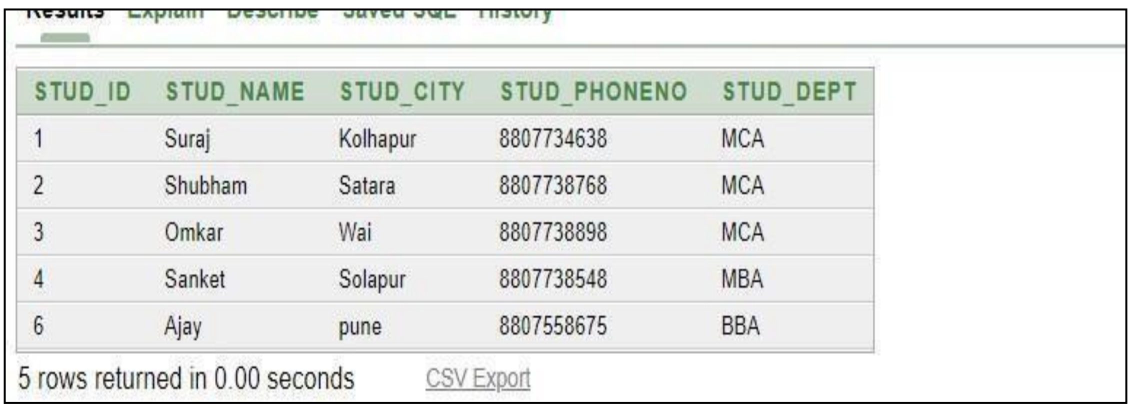
```
UPDATEtablesetStud_Dept='MCA'whereStud_Dept='BCA';
```

Output:



```
3 row(s) updated.

0.00 seconds
```



STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	MCA
2	Shubham	Satara	8807738768	MCA
3	Omkar	Wai	8807738898	MCA
4	Sanket	Solapur	8807738548	MBA
6	Ajay	pune	8807558675	BBA

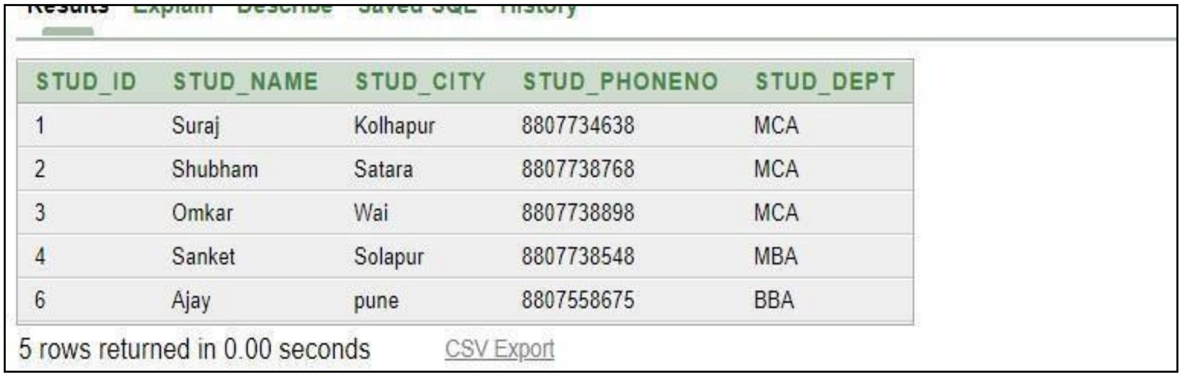
5 rows returned in 0.00 seconds

D. Delete:

Beforedeletingthetable:

```
select*from Std;
```

Output:



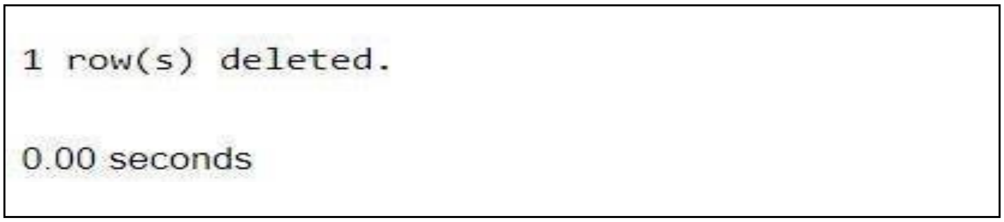
STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	MCA
2	Shubham	Satara	8807738768	MCA
3	Omkar	Wai	8807738898	MCA
4	Sanket	Solapur	8807738548	MBA
6	Ajay	pune	8807558675	BBA

5 rows returned in 0.00 seconds

E. AfterDeletingthetable:

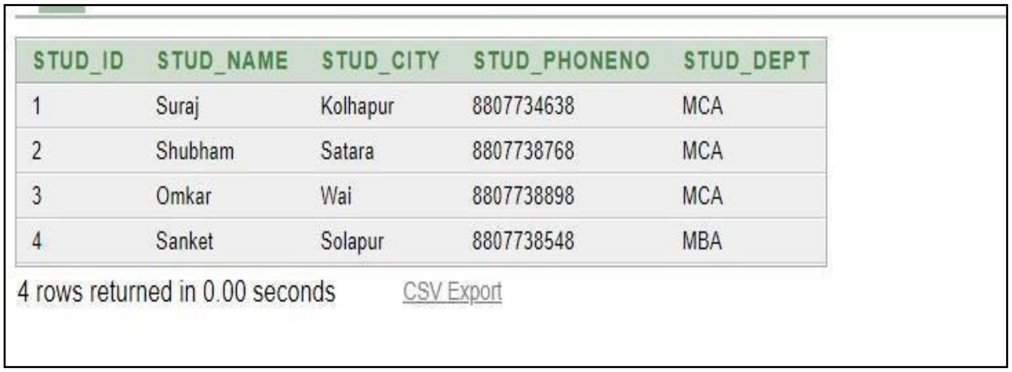
```
deletefromStdwhere Stud_id=6;
```

Output:



```
1 row(s) deleted.

0.00 seconds
```



STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	MCA
2	Shubham	Satara	8807738768	MCA
3	Omkar	Wai	8807738898	MCA
4	Sanket	Solapur	8807738548	MBA

4 rows returned in 0.00 seconds

Conclusion:

ExperimentNo:6

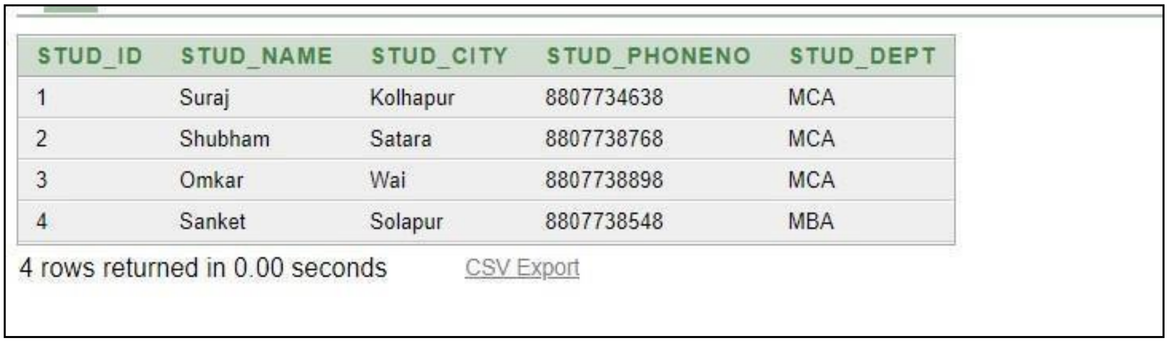
Title:Tomodifyatable. Theory:

Query:

BeforeModifythe table:

select*from Std;

Output:



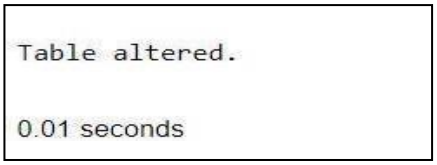
STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	MCA
2	Shubham	Satara	8807738768	MCA
3	Omkar	Wai	8807738898	MCA
4	Sanket	Solapur	8807738548	MBA

4 rows returned in 0.00 seconds CSV Export

A. Adding thecolumn:

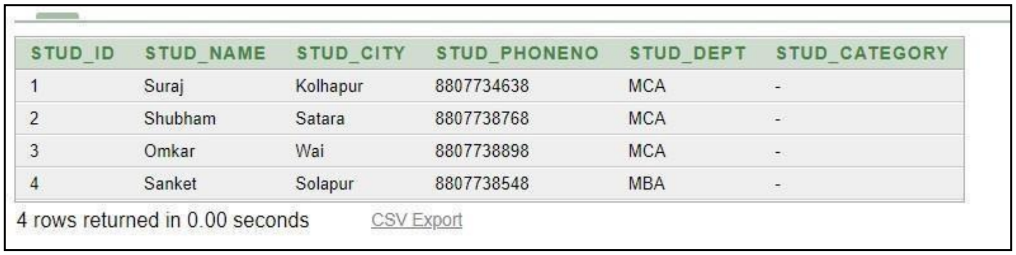
AltertableStdAddStud_Categoryvarchar(20);

Output:



```
Table altered.

0.01 seconds
```



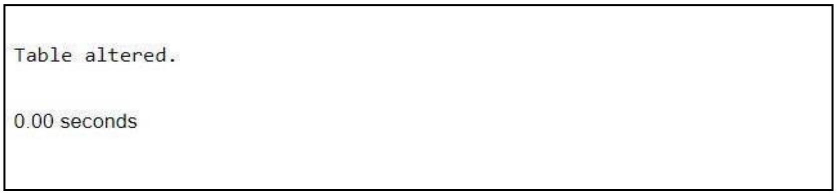
STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT	STUD_CATEGORY
1	Suraj	Kolhapur	8807734638	MCA	-
2	Shubham	Satara	8807738768	MCA	-
3	Omkar	Wai	8807738898	MCA	-
4	Sanket	Solapur	8807738548	MBA	-

4 rows returned in 0.00 seconds CSV Export

B. Modify column:

AltertableStdModifyStud_Categoryvarchar(10);

Output:



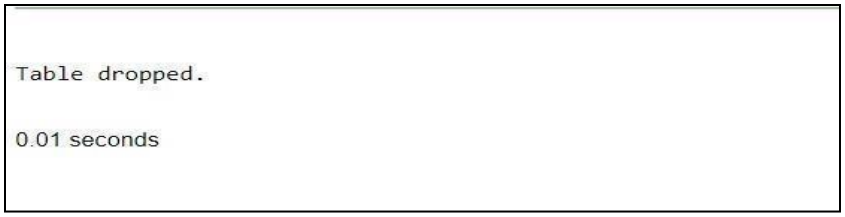
```
Table altered.

0.00 seconds
```

C. Dropcolumn:

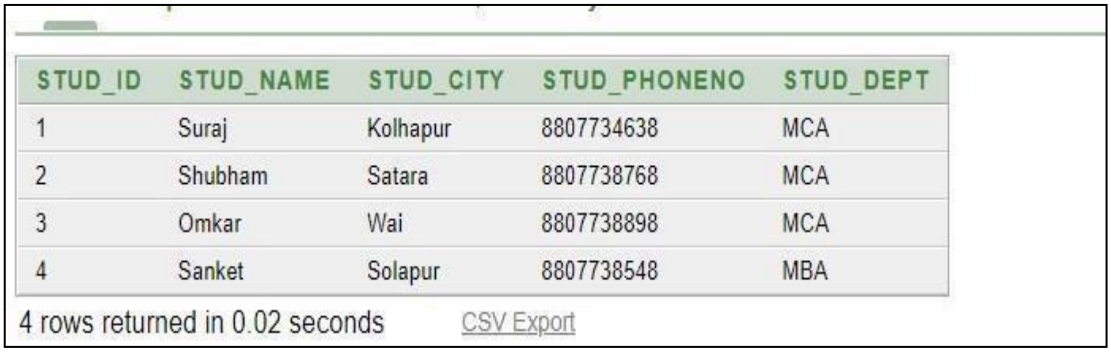
ltertableStdDropcolumnStud_Category;

Output:



```
Table dropped.

0.01 seconds
```



STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	MCA
2	Shubham	Satara	8807738768	MCA
3	Omkar	Wai	8807738898	MCA
4	Sanket	Solapur	8807738548	MBA

4 rows returned in 0.02 seconds

Conclusion:

YSPM

Name: **Dwarkesh Prakash Waingade** **Date:**

Class:MCA-I **Roll No.:57**

Subject:RDBMS

ExperimentNo:7

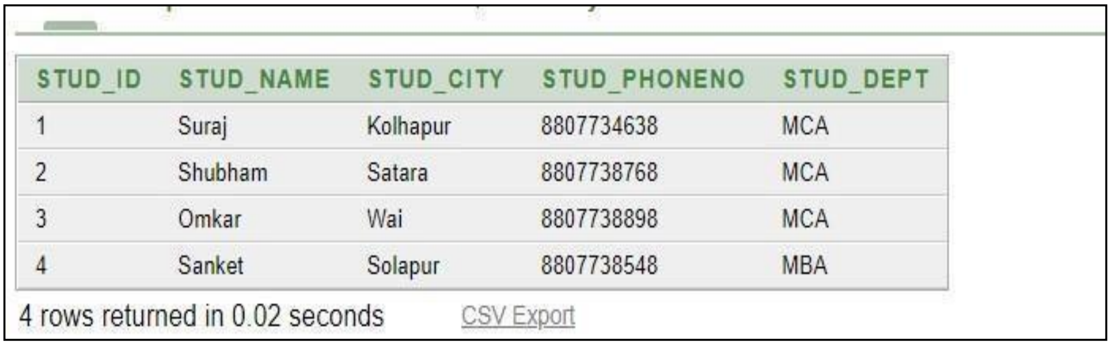
<u>Title</u>:Createtablefromanothertable.

<u>Query:</u>

Old table(Std):

```
select*from Std;
```

<u>Output:</u>



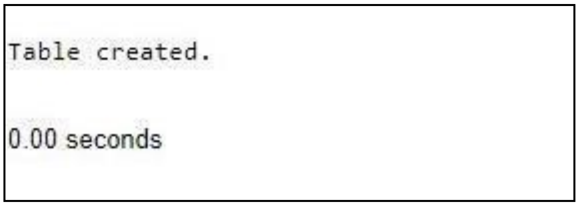
STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	MCA
2	Shubham	Satara	8807738768	MCA
3	Omkar	Wai	8807738898	MCA
4	Sanket	Solapur	8807738548	MBA

4 rows returned in 0.02 seconds CSV Export

Newtable (Exam_Details):

```
createtableExam_Detailsas(select*from Std);
```

<u>Output:</u>



```
Table created.

0.00 seconds
```

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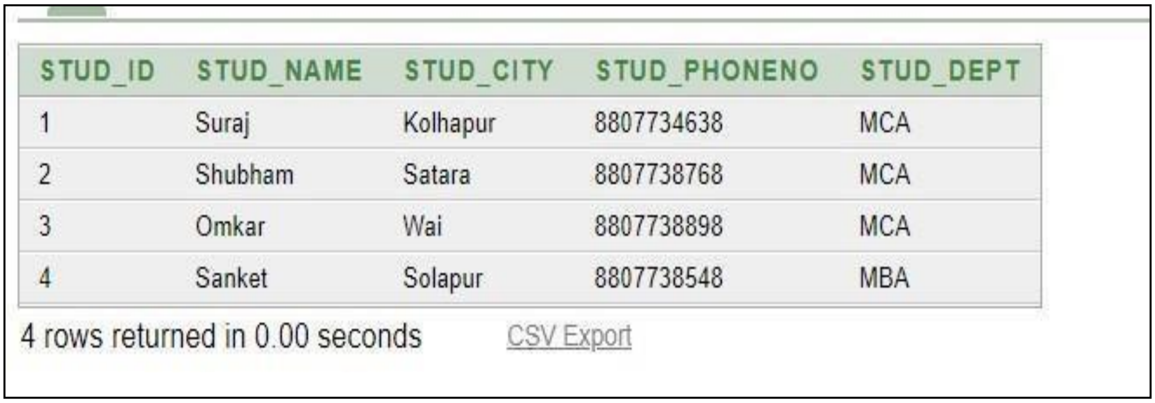


STUD_ID	STUD_NAME	STUD_CITY	STUD_PHONENO	STUD_DEPT
1	Suraj	Kolhapur	8807734638	MCA
2	Shubham	Satara	8807738768	MCA
3	Omkar	Wai	8807738898	MCA
4	Sanket	Solapur	8807738548	MBA

4 rows returned in 0.00 seconds

Conclusion:

Name: Dwarkesh Prakash Waingade **Date:**

Class:MCA-I **Roll No.:57**

Subject:RDBMS

ExperimentNo:8

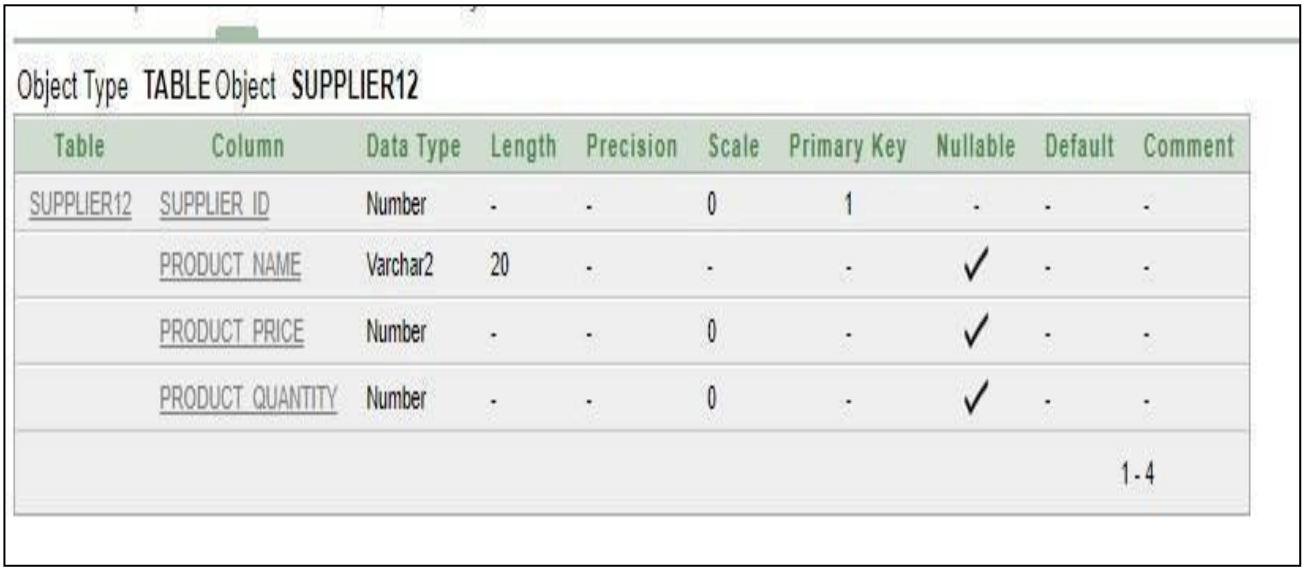
<u>Title</u>: Create table using primary key and foreign key.

<u>Query:</u>

<u>A. PRIMARYKEY:</u>

```
createtableSupplier12 (

supplier_idintprimarykey,

Product_namevarchar(20),

Product_Price int,

Product_Quantity int

);
```

<u>Output:</u>



Object Type TABLE Object SUPPLIER12

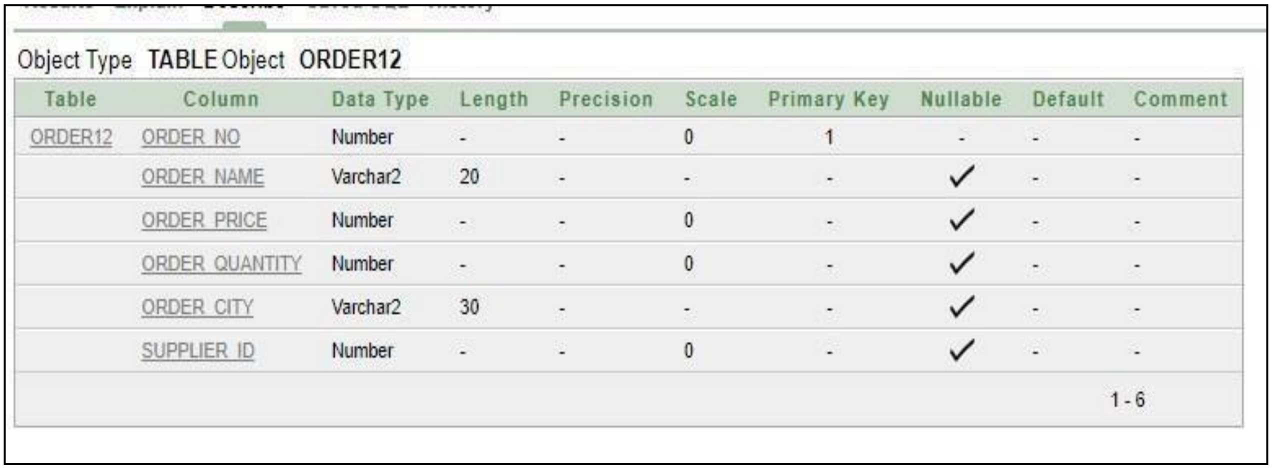
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
SUPPLIER12	SUPPLIER_ID	Number	-	-	0	1	-	-	-
	PRODUCT_NAME	Varchar2	20	-	-	-	✓	-	-
	PRODUCT_PRICE	Number	-	-	0	-	✓	-	-
	PRODUCT_QUANTITY	Number	-	-	0	-	✓	-	-

1 - 4

B. FOREIGN KEY:

```
createtableOrder12 (

Order_Nointprimarykey,

Order_name varchar(20),

Order_Price int,

Order_Quantityint,Order_cityvarchar(30),supplier_id
int,

foreignkey(supplier_id)referencesSupplier12(supplier_id)

);
```

Output:



Object Type TABLE Object ORDER12

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
ORDER12	ORDER_NO	Number	-	-	0	1	-	-	-
	ORDER_NAME	Varchar2	20	-	-	-	✓	-	-
	ORDER_PRICE	Number	-	-	0	-	✓	-	-
	ORDER_QUANTITY	Number	-	-	0	-	✓	-	-
	ORDER_CITY	Varchar2	30	-	-	-	✓	-	-
	SUPPLIER_ID	Number	-	-	0	-	✓	-	-

1 - 6

Conclusion:

Name: Dwarkesh Prakash Waingade **Date:**

Class:MCA-I **Roll No.:57**

Subject:RDBMS

ExperimentNo:9

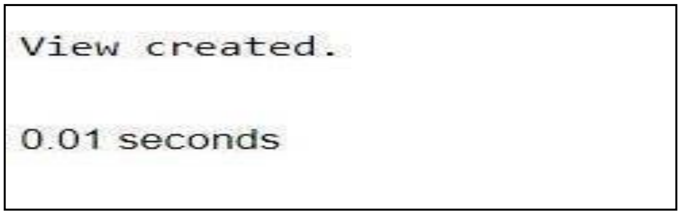
<u>Title</u>: Study of view and indexes in database.

<u>Query:</u>

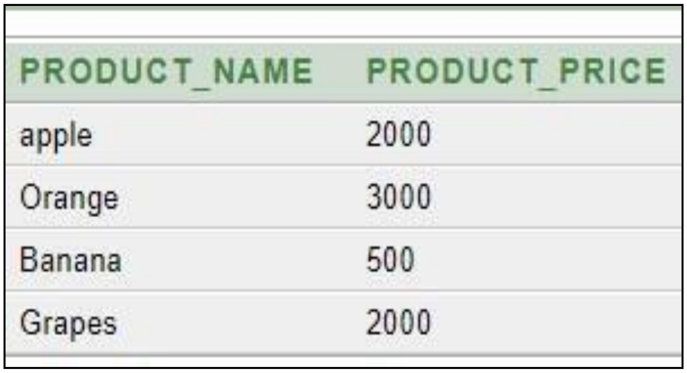
A. CreatingViews:

```
createviewSupplier12_viewasselectproduct_name,product_pricefromSupplier12;
```

<u>Output:</u>



```
View created.

0.01 seconds
```

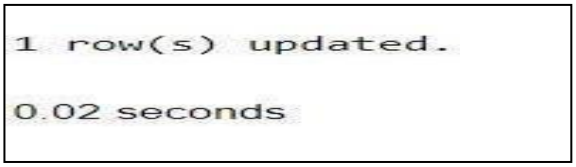


PRODUCT_NAME	PRODUCT_PRICE
apple	2000
Orange	3000
Banana	500
Grapes	2000

B. UpdatingViews:

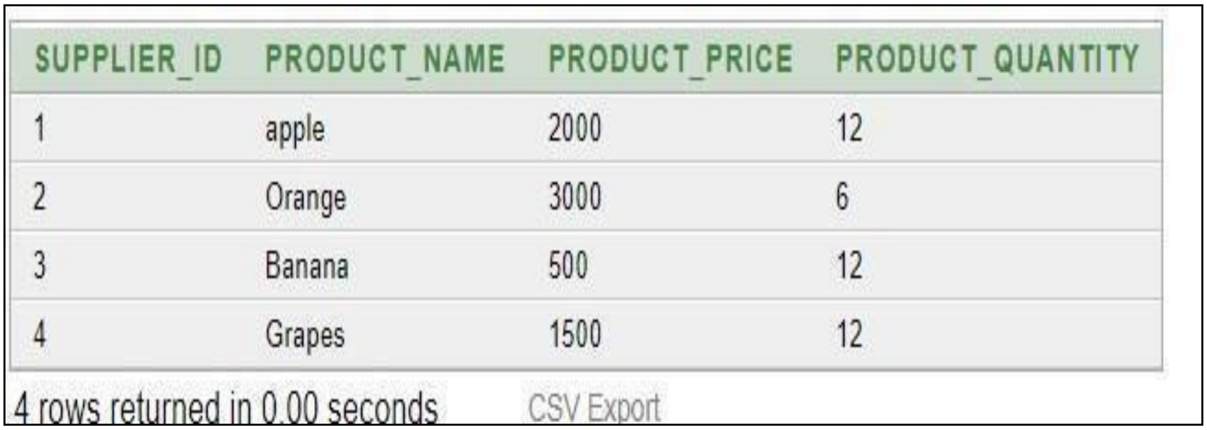
```
updateSupplier12_viewsetproduct_price=1500whereproduct_name='Grapes';
```

<u>Output:</u>



```
1 row(s) updated.

0.02 seconds
```

FacultyOfMCA



SUPPLIER_ID	PRODUCT_NAME	PRODUCT_PRICE	PRODUCT_QUANTITY
1	apple	2000	12
2	Orange	3000	6
3	Banana	500	12
4	Grapes	1500	12

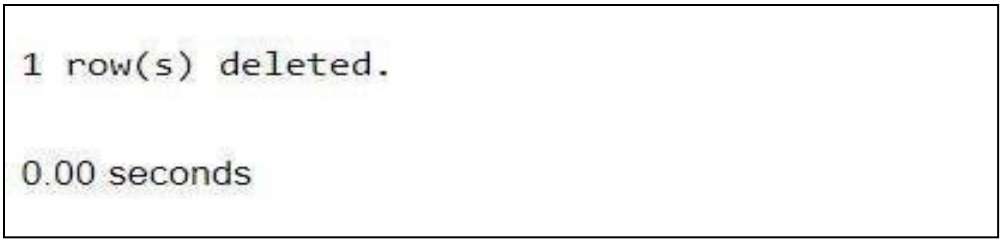
4 rows returned in 0.00 seconds CSV Export

B.Deleting views:

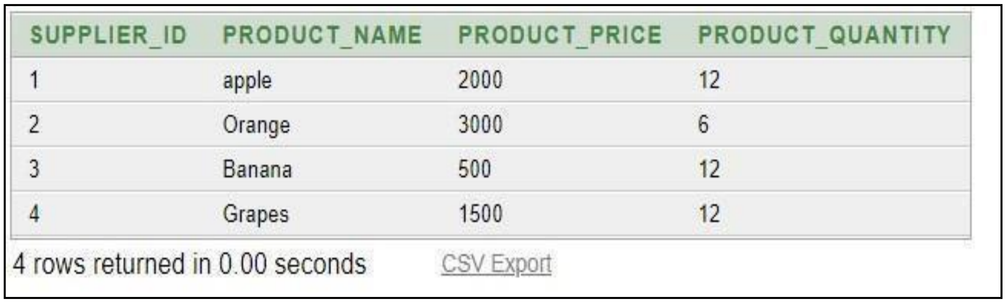
Example:

deletefromSupplier12_viewwhereproduct_price=1500;

Output:



```
1 row(s) deleted.

0.00 seconds
```



SUPPLIER_ID	PRODUCT_NAME	PRODUCT_PRICE	PRODUCT_QUANTITY
1	apple	2000	12
2	Orange	3000	6
3	Banana	500	12
4	Grapes	1500	12

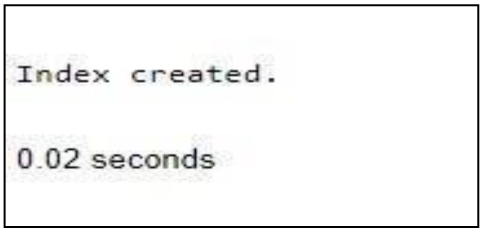
4 rows returned in 0.00 seconds CSV Export

INDEXESIN DATABASE:

Creatingindex-createindexSupplier12_indexon

Supplier12(Supplier_id,Product_name);

Output:

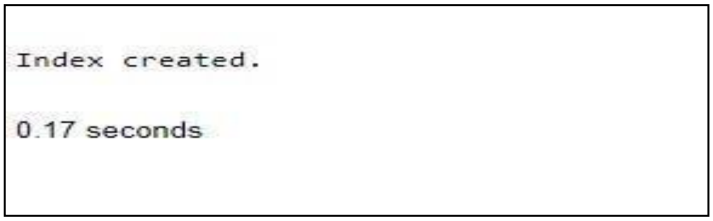


```
Index created.

0.02 seconds
```

Single-Columnindex:

createindexSupplier12_indexonSupplier12(Product_name);

Output:

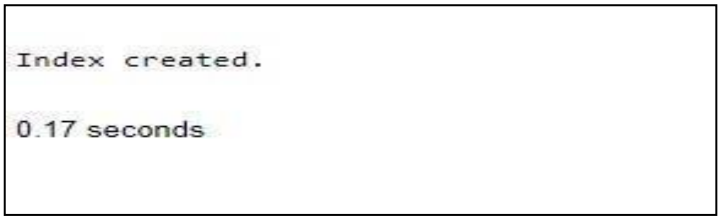


```
Index created.

0.17 seconds
```

UniqueIndex:

createuniqueindexSupplier_index1onSupplier12(Product_name);

Output:

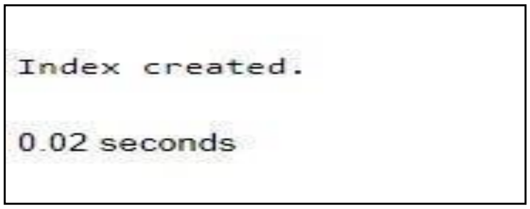


```
Index created.

0.17 seconds
```

CompositeIndex:

```
createindexSupplier_indexonSupplier12(Supplier_id,Product_name);
```

Output:

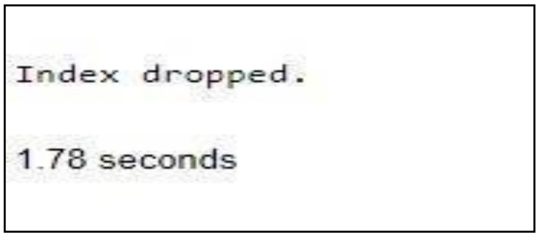


```
Index created.

0.02 seconds
```

Droppingindex:

```
dropindexSupplier_index;
```

Output:



```
Index dropped.

1.78 seconds
```

Conclusion:

D

Name:Dwarkesh Prakash Waingade

Date:

Class:MCA-I

Roll No.:57

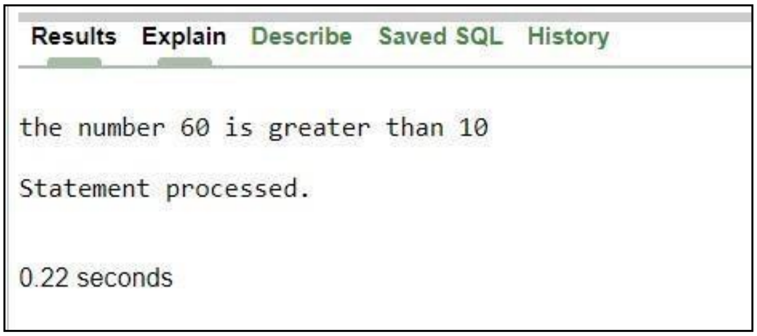
Subject:RDBMS

ExperimentNo:10

<u>Title</u>:WAPtofindwhetheranumberislessthan orgreaterthan5. <u>Query:</u>

```
declare

num1 number:=60;

beginifnum1<10thendbms_output.put_line('thenumber '||num1||'

is smaller than 10'); elsif num1 > 10

thendbms_output.put_line('thenumber'||num1||'isgreaterthan10');

else dbms_output.put_line('the number '||num1||' is a positive 10');end

if; end;
```

<u>Output:</u>



```
the number 60 is greater than 10

Statement processed.


0.22 seconds
```

<u>Conclusion:</u>

FacultyOfMCA

D

Name:Dwarkesh Prakash Waingade

Date:

Class:MCA-I

Roll No.:57

Subject:RDBMS

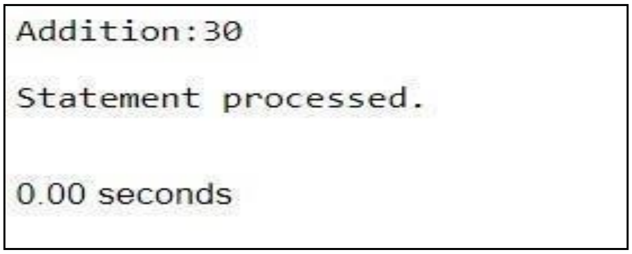
ExperimentNo:11

Title:WAPtoperformvariousarithmeticoperations. Query:

A. Addition:

```
Declare        a
integer:=10;b
integer:=20;c
integer;
begin                                    c:=a+b;
dbms_output.put_line('Addition:'||c);end;
```

Output:



```
Addition:30

Statement processed.

0.00 seconds
```

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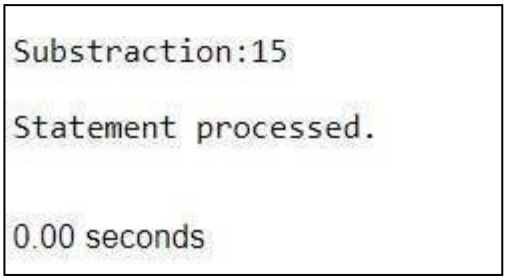
B. Substraction:

```
Declare a

integer:=30;b

integer:=15;c

integer;

beginc:=a-b;

dbms_output.put_line('Substraction:'||c);

  end;
```

Output:

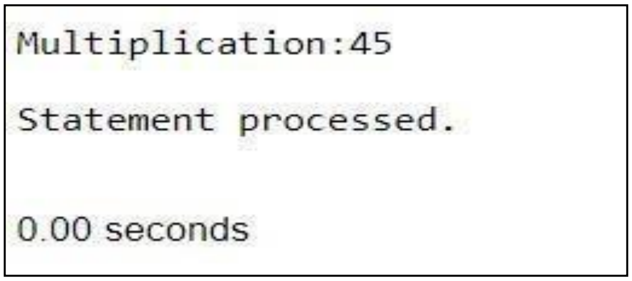


```
Substraction:15

Statement processed.


0.00 seconds
```

C. Multiplication:

```
Declarea

integer:=3;b

integer:=15;

c integer;

beginc:=a*b;

dbms_output.put_line('Multiplication:'||c);

 end;
```

Output:

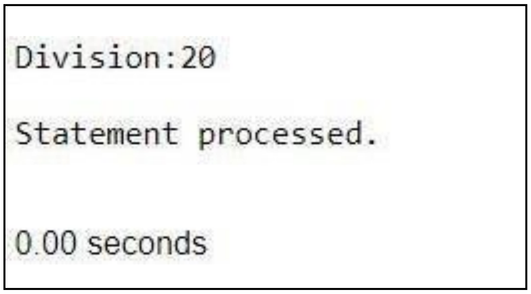


```
Multiplication:45

Statement processed.


0.00 seconds
```

D. Division:

```
Declare a integer:=300;b
integer:=15;cinteger;beginc:=a/b;
dbms_output.put_line('Division:'||c);
end;
```

Output:



```
Division:20

Statement processed.


0.00 seconds
```

Conclusion:

Name:Dwarkesh Prakash Waingade **Date:**

Class:MCA-I **Roll No.:57**

Subject:RDBMS

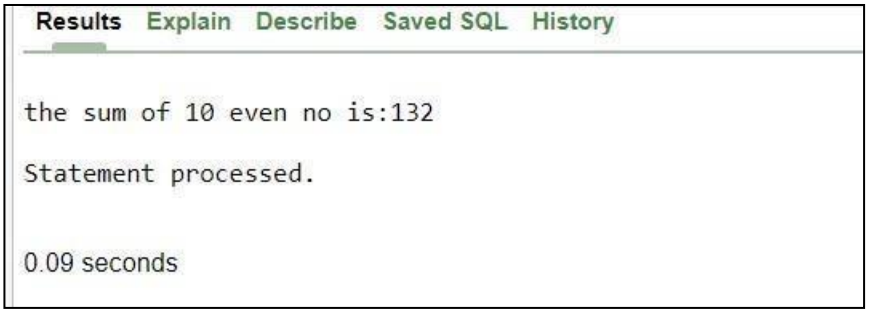
ExperimentNo:12

Title: WAP to calculate sum of even numbers upto 10.

Query:

```
declare   even

number:=0;   i

number;begin

foriin1..22

loop

if(imod2=0)theneven:=even+i;

end if;

endloop;

dbms_output.put_line('the

sum of 10 even no

is:'||even);

end;
```

Output:



```
the sum of 10 even no is:132

Statement processed.


0.09 seconds
```

Conclusion:

Name:Dwarkesh Prakash Waingade **Date:**

Class:MCA-I **Roll No.:57**

Subject:RDBMS

ExperimentNo:13

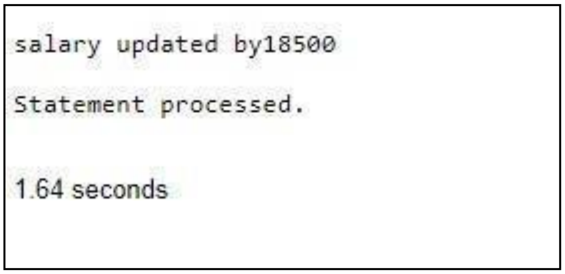
<u>Title</u>:WAPtousesdatatypeofsalfromtable(%typeattribute).

<u>Theory</u>:

<u>Query:</u>

```
Declare

salaryEmployee.Emp_salary%type;

begin

nsertintoEmployee(Emp_Name,Dept_No,Emp_salary,Emp_No)values('Vijay',8,18000,9);update

Employee set Emp_salary=Emp_salary+500 where Emp_No=9;select Emp_salary into salary From

Employee where Emp_No=9;select Emp_salary into salary From Employee where

Emp_No=9;dbms_output.put_line('salary updated by'||salary);end;
```

<u>Output:</u>



```
salary updated by18500

Statement processed.

1.64 seconds
```

<u>Conclusion:</u>

FacultyOfMCA

ExperimentNo:14

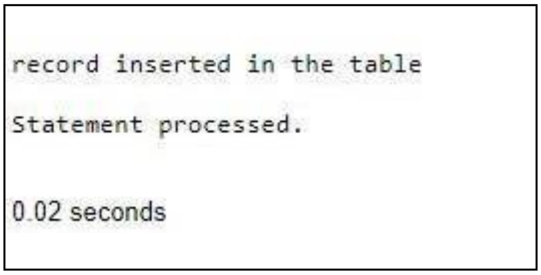
Title:WAPtoinsertemployeecodeintoemployeetable(%rowtypeattribute).

Theory:

Query:

```
Declare

Emp Employee%Rowtype;

begin

Emp.Emp_Name:='Aditya';

Emp.Dept_No:=1;

Emp.Emp_Salary:=15000;Emp.Emp_No:=3;

insert into Employee(Emp_Name,Dept_No,Emp_Salary,Emp_No)
values(Emp.Emp_Name,Emp.Dept_No,Emp.Emp_Salary,Emp.Emp_No);

dbms_output.put_line('recordinsertedinthetable');end;
```

Output:



```
record inserted in the table

Statement processed.

0.02 seconds
```

Conclusion:

Name:Dwarkesh Prakash Waingade

Date:

Class:MCA-I

Roll No.:57

Subject:RDBMS

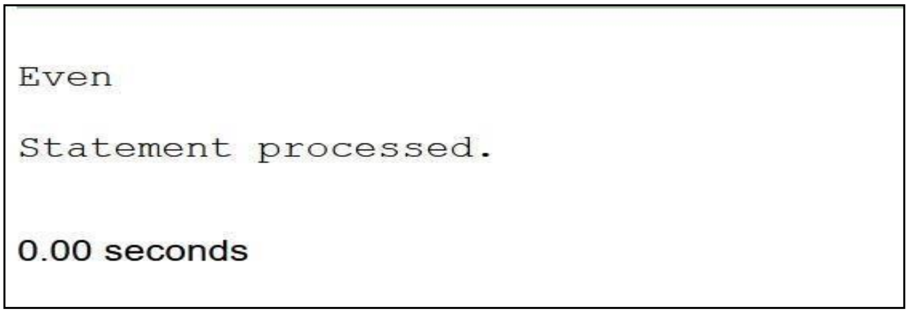
ExperimentNo:15

Title:**WAPapl/sqlcodetocheckwhetheranumberisevenorodd.** **Theory:**

Query:

```
declare
--Declarevariablen,s, r,len
--andmofdatatypenumber n
number := 3268;         r
number;begin
r:=MOD(n,2);ifr=0 THEN
dbms_output.Put_line('Even');
else
dbms_output.Put_line('Odd');
end if;end;
```

Output:



```
Even

Statement processed.

0.00 seconds
```

Conclusion:

FacultyOfMCA

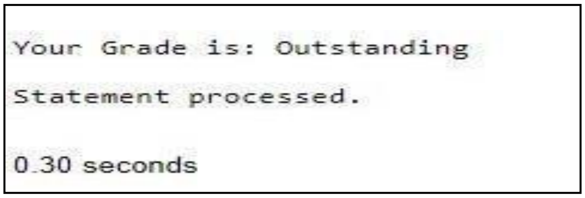
ExperimentNo:16

Title:WAPtofindgradesofastudent.

Query:

```
declaregrd
CHAR(1);
begin   grd:=
'A';   casegrd

when 'A' then dbms_output.Put_line('Your Grade is: Outstanding');
  when 'B' then dbms_output.Put_line('Your Grade is: Excellent');
  when 'C' then dbms_output.Put_line('Your Grade is: Very Good');
  when 'D' then dbms_output. Put_line('Your Grade is: Average');
  when 'F' then dbms_output.Put_line('Your Grade is: Poor');
  elsedbms_output.Put_line('Nosuchgradeinthelist.');
  end case;   end;
```

Output:



```
Your Grade is: Outstanding
Statement processed.

0.30 seconds
```

Conclusion:

FacultyOfMCA

Name: Dwarkesh Prakash Waingade

Date:

Class:MCA-I

Roll No.:57

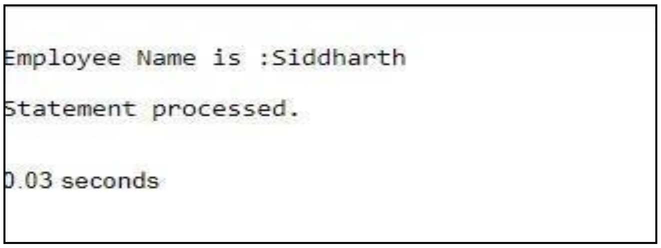
Subject:RDBMS

ExperimentNo:17

Title:WriteaPL/SQLcodewhichexplainstheusageofno_data_foundexception. Query:

```
l_nameEmployee.Emp_Name%type;l_Emp_id

Employee.Emp_Id%type:=102;

begin

--getthecustomer

selectEmp_Nameintol_NameFromEmployeewhereEmp_Id=l_Emp_id;

--showthecustomernamedbms_output.put_line('EmployeeNameis:'||l_name);

exception

WHENNO_DATA_FOUNDTHEN

dbms_output.put_line('Employee'||l_Emp_id||'numberdoesnotexist');end;
```

Output:



```
Employee Name is :Siddharth

Statement processed.

0.03 seconds
```

Conclusion:

FacultyOfMCA

Name: Dwarkesh Prakash Waingade **Date:**

Class:MCA-I **Roll No.:57**

Subject:RDBMS

ExperimentNo:18

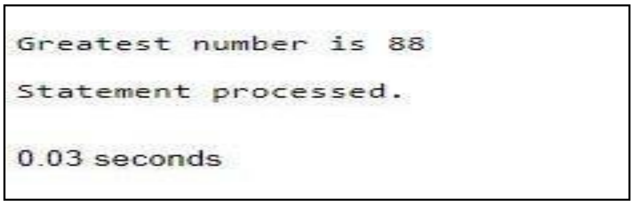
<u>Title</u>:WAPapl/sqlcodetofindgraternumberamongthreenumbers.

<u>Theory:</u>

<u>Query:</u>

```
declare

a        number:=60;

b        number := 88;    cnumber:=75;

begin

  if a > banda > c then

dbms_output.Put_line('Greatestnumberis'||a);

  elsifb > aandb > c then

dbms_output.Put_line('Greatestnumberis'||b);

  else

  dbms_output.Put_line('Greatestnumberis'||c);

  end if;

end;
```

<u>Output:</u>



```
Greatest number is 88

Statement processed.

0.03 seconds
```

<u>Conclusion:</u>

FacultyOfMCA

Name:Dwarkesh Prakash Waingade **Date:**

Class:MCA-I **Roll No.:57**

Subject:RDBMS

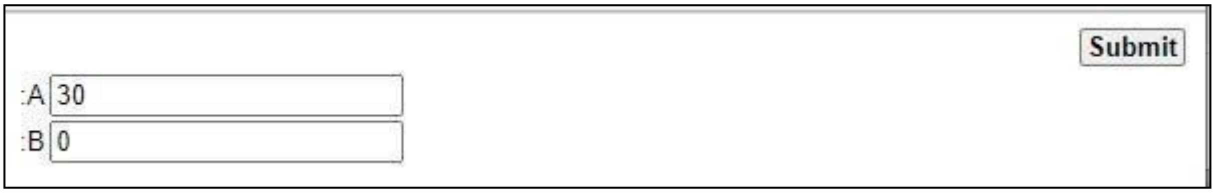
ExperimentNo:19

<u>Title</u>:Writeapl/sqlcodetodemonstratethepredefinedexceptioninprogram. <u>Theory:</u>

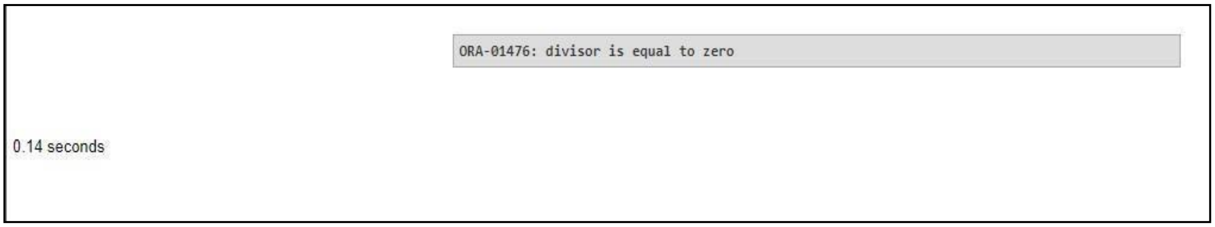
<u>Query:</u>

```
Declare a
 number;
 bnumber;
 c number;
 begina:=:a;b:=:b;
c:=a/b;

dbms_output.put_line('cis:='||c);end;
```

<u>Output:</u>



:A 30
:B 0



```
ORA-01476: divisor is equal to zero

0.14 seconds
```

<u>Conclusion:</u>

FacultyOfMCA

Name:Dwarkesh Prakash Waingade **Date:**

Class:MCA-I **Roll No.:57**

Subject:RDBMS

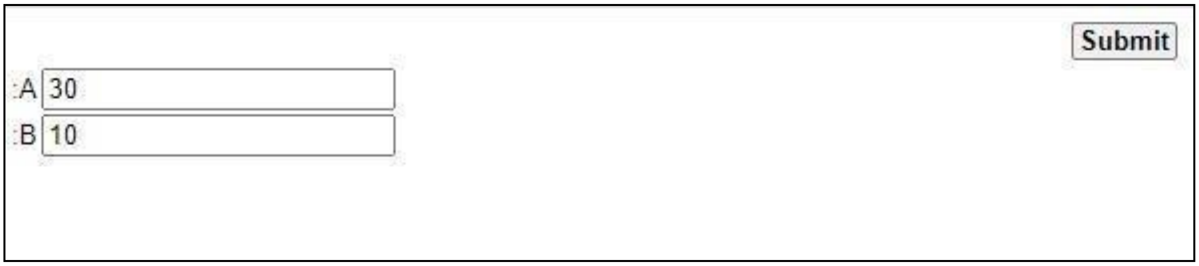
ExperimentNo:20

Title:writeapl/sqlcodetoremoveprobleminprogram10.

Query:

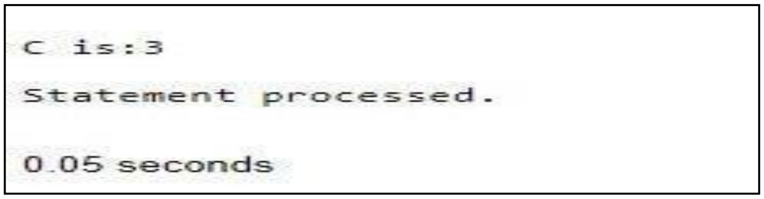
```
Declareanumber;bnumber;cnumber;

begina:=:a;b:=:b;

c:=a/b;dbms_output.put_line('Cis:'||c);

exception when zero_divide then

 dbms_output.put_line('divisionofanynumberbyzerowillraiseaproblem,verifyinputvalues.'); end;
```

Output:



:A 30

:B 10



```
C is:3

Statement processed.

0.05 seconds
```

Conclusion:

FacultyOfMCA

Name:Rutuja Anandrao Patil **Date:**

Class:MCA-I **Roll No.:23**

Subject:RDBMS

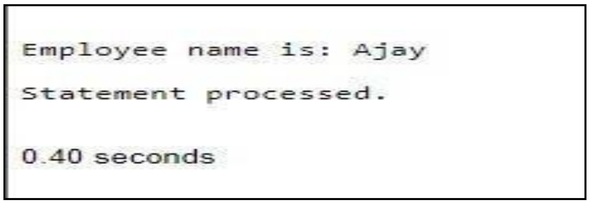
ExperimentNo:21

Title:writea pl/sqlcode which handlesmorethan oneexception.

Query:

```
Declare

NameEmployee.Emp_Name%type;

begin

select Emp_Name into Name From Employee where Dept_No=6;

dbms_output.put_line('Employeenameis:'||Name);exceptionwhen zero_divide

then

dbms_output.put_line('NotPossible!');

when too_many_rows then

dbms_output.put_line('Morethan1rowisreturned.');when others

then

dbms_output.put_line('Nodatafound.');end;
```

Output:



```
Employee name is: Ajay
Statement processed.

0.40 seconds
```

Conclusion:

FacultyOfMCA

ExperimentNo:22

Title:writeapl/sqlcodewhichexplaintheusageofNO_DATA_FOUNDexception.

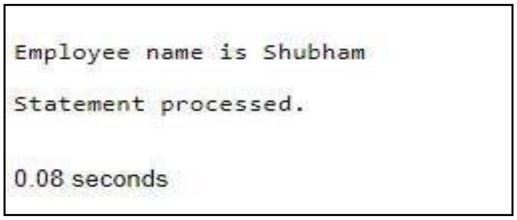
Theory:

Query:

```
Declare

 ENameEmployee.Emp_Name%TYPE;

 Emp_id1Employee.Emp_No%TYPE:=:Emp_No; Begin

SELECTEmp_NameINTOEName

 FROM Employee

 WHEREEmp_No=Emp_id1;

 -- show the customer name        dbms_output.put_line('Employee

name is ' || EName);

EXCEPTION

 WHENNO_DATA_FOUNDTHEN

 dbms_output.put_line('Employee'||Emp_id1||'doesnotexist'||'NODataFound'); end;
```

Output:

:EMP_NO 2



```
Employee name is Shubham

Statement processed.

0.08 seconds
```

Conclusion:

Name:Rutuja Anandrao Patil **Date:**

Class:MCA-I **Roll No.:23**

Subject:RDBMS

ExperimentNo:23

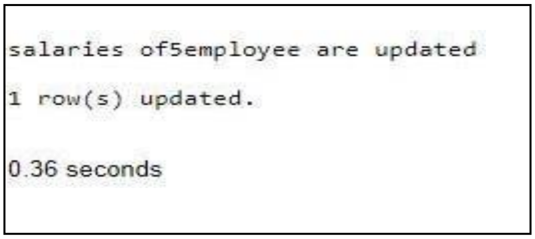
Title:writeapl/sqlcodethatusesimplicitcursorattributesinthisprogramupdatesalaryof employee, if the salary is not updated then display message for that.

Theory:

Query:

```
declarerows

number(5);

beginupdateEmployeesetEmp_Salary=Emp_Salary+1000; if

SQL%NOTFOUND then

dbms_output.put_line('noneofthesalarieswereupdated');

elsifSQL%FOUNDthenrows:=

SQL%ROWCOUNT;

dbms_output.put_line('salariesof'||rows||'employeeareupdated'); end

if;end;
```

Output:



```
salaries of5employee are updated

1 row(s) updated.

0.36 seconds
```

Conclusion:

FacultyOfMCA

Name:Dwarkesh Prakash Waingade **Date:**

Class:MCA-I **Roll No.:57**

Subject:RDBMS

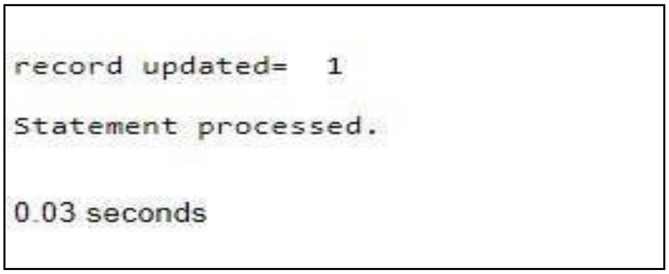
ExperimentNo:24

Title:writeapl/sqlcodethatreturnsthetotalno.ofrowsthatareupdatedusingROWCOUNT attribute.

Query:

```
DeclarebeginupdateEmployeesetEmp_Salary=Emp_Salary*2where

Emp_No=2;dbms_output.put_line('record updated=' ||

SQL%ROWCOUNT);end;
```

Output:



```
record updated=  1

Statement processed.

0.03 seconds
```

Conclusion:

FacultyOfMCA

YSPM

Name:Dwarkesh Prakash Waingade **Date:**

Class:MCA-I **Roll No.:57**

Subject:RDBMS

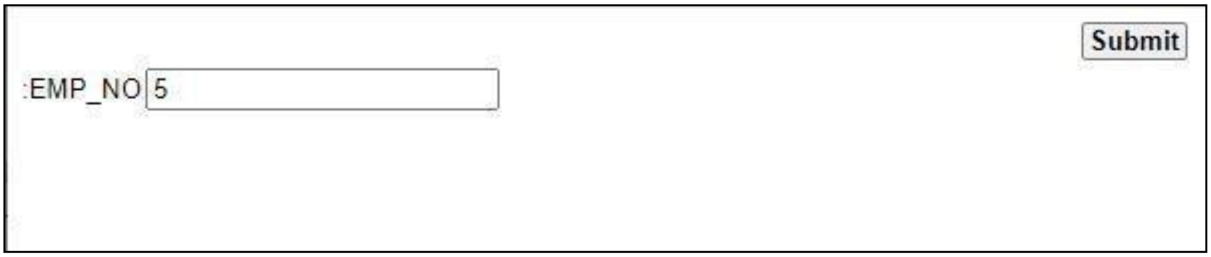
ExperimentNo:25

<u>Title</u>:WriteaPL/SQLcodetodeletearecordfromtable,ifdeleteoperationsucceedsthe insert operation.

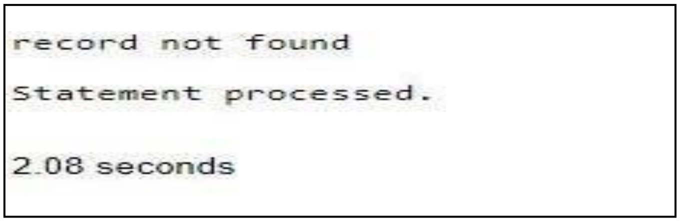
<u>Query:</u>

```
Declarebegin

deletefromEmployeewhereEmp_No=:Emp_No;if
SQL%FOUND then

dbms_output.put_line('Record found & deleted');
insert into Employee values('Saurabh',3,15000,5);
elsedbms_output.put_line('recordnotfound');end
if;end;
```

<u>Output:</u>



:EMP_NO 5



```
record not found

Statement processed.

2.08 seconds
```

<u>Conclusion:</u>

FacultyOfMCA

Name:Dwarkesh Prakash Waingade **Date:**

Class:MCA-I **Roll No.:57**

Subject:RDBMS

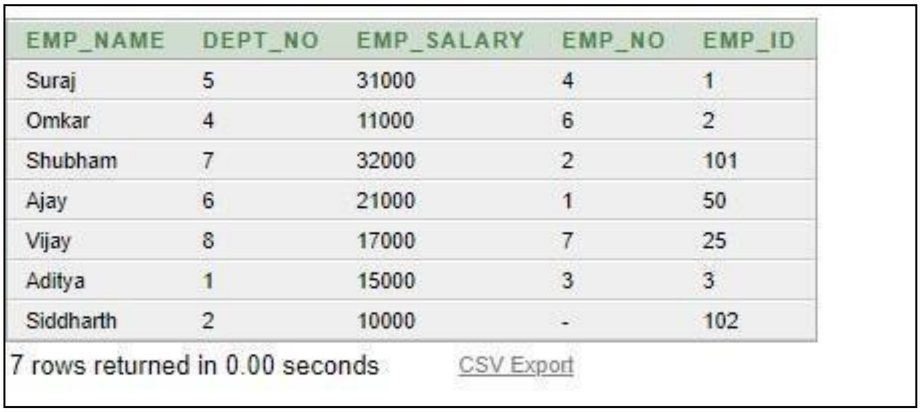
ExperimentNo:26

<u>Title</u>:Writea PL/SQLcodeto demonstratetheexception.

<u>Query:</u>

```
Select*fromEmployee;
```

<u>Output:</u>



EMP_NAME	DEPT_NO	EMP_SALARY	EMP_NO	EMP_ID
Suraj	5	31000	4	1
Omkar	4	11000	6	2
Shubham	7	32000	2	101
Ajay	6	21000	1	50
Vijay	8	17000	7	25
Aditya	1	15000	3	3
Siddharth	2	10000	-	102

7 rows returned in 0.00 seconds

<u>A. Code:</u>

```
DeclareBegin

insertintoEmployee(Emp_Name,Emp_Salary,Emp_Id)values('Vishal',12000,101);exception

WHENDUP_VAL_ON_INDEXTHEN

dbms_output.put_line('Primarykeycannotbeduplicate.');end;
```

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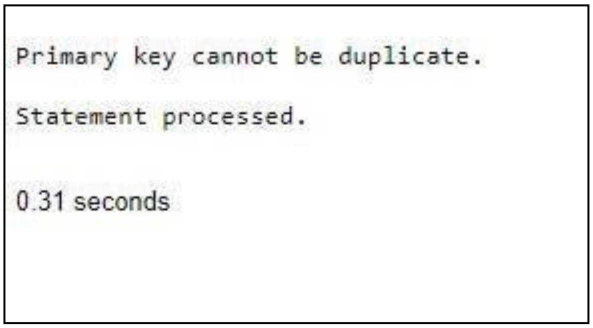
Output:



```
Primary key cannot be duplicate.

Statement processed.

0.31 seconds
```

Conclusion:

Name:Dwarkesh Prakash Waingade **Date:**

Class:MCA-I **Roll No.:57**

Subject:RDBMS

ExperimentNo:27

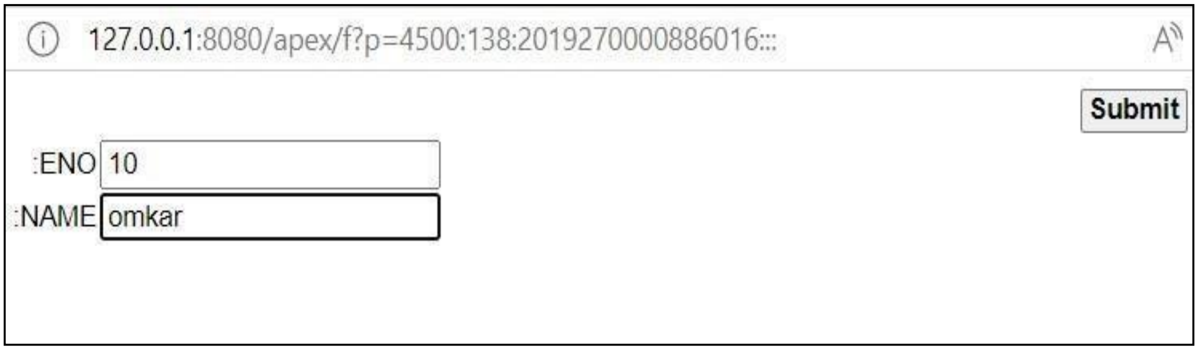
<u>Title</u>:Createauserdefinedexceptionwhichchecksthenameoftheemployeeisbankduring the insertion.If you left the name blank it will raise error.

<u>Theory:</u>

<u>Query:</u>

```
declare

enoemp1.emp_id%type;name
emp1.emp_name%type;
name_exception exception;
begin eno:=:eno;

name:=:name;

ifnameisnullthenraise
name_exception;

endif;

insert into emp1(emp_id,emp_name)values(eno,name);
dbms_output.put_line('Dataenteredintotherow.');exception

whenname_exceptionthen

dbms_output.put_line('enameshouldnotbeempty.');end;
```

<u>Output:</u>



127.0.0.1:8080/apex/f?p=4500:138:2019270000886016:::

:ENO 10

:NAME omkar

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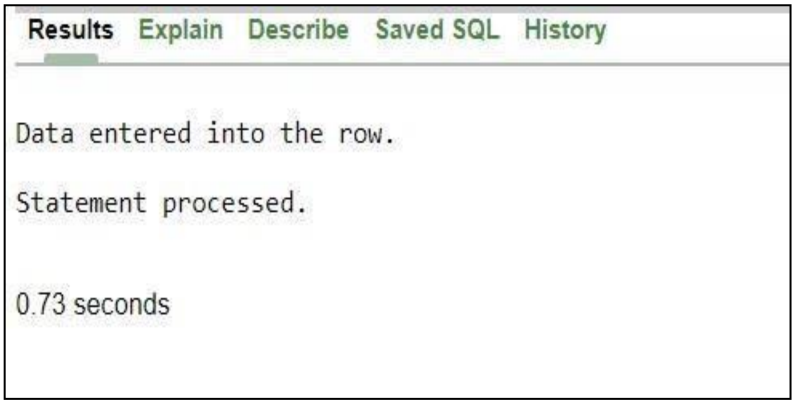


```
Data entered into the row.

Statement processed.


0.73 seconds
```

Conclusion:

Name:DineshRameshPawar **Date:**

Class:MCA-I **Roll No.:24**

Subject:RDBMS

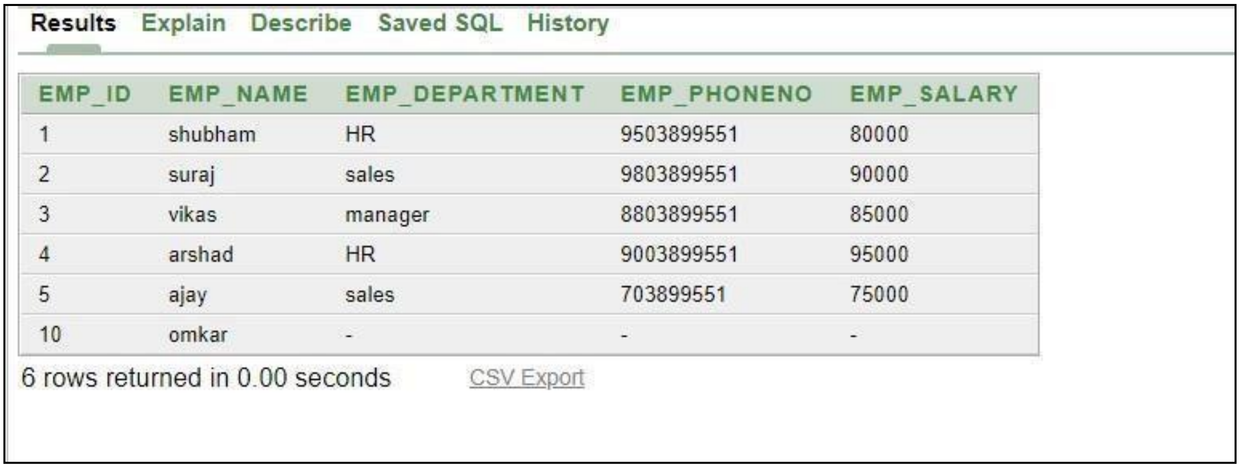
ExperimentNo:28

Title:Writea PL/SQLcodeto displaytheinformationoftheemployeetablewith %NOTFOUNDattribute.

Query:

```
Select*fromemp1;
```

Output:



EMP_ID	EMP_NAME	EMP_DEPARTMENT	EMP_PHONENO	EMP_SALARY
1	shubham	HR	9503899551	80000
2	suraj	sales	9803899551	90000
3	vikas	manager	8803899551	85000
4	arshad	HR	9003899551	95000
5	ajay	sales	703899551	75000
10	omkar	-	-	-

6 rows returned in 0.00 seconds

A. Code:

```
declareeidemp1.emp_id%type;name
emp1.emp_name%type; salary
emp1.emp_salary%type;
cursorcursor1isselectemp_id,emp_name,emp_salaryfromemp1;beginopencursor1; loop
fetchcursor1intoeid,name,salary;exitwhen
cursor1%NOTFOUND;
dbms_output.put_line('emp_id='||eid||''||'emp_name='||''||name||''||'emp_
salary='||salary); end
loop;closecursor1;end;/
```

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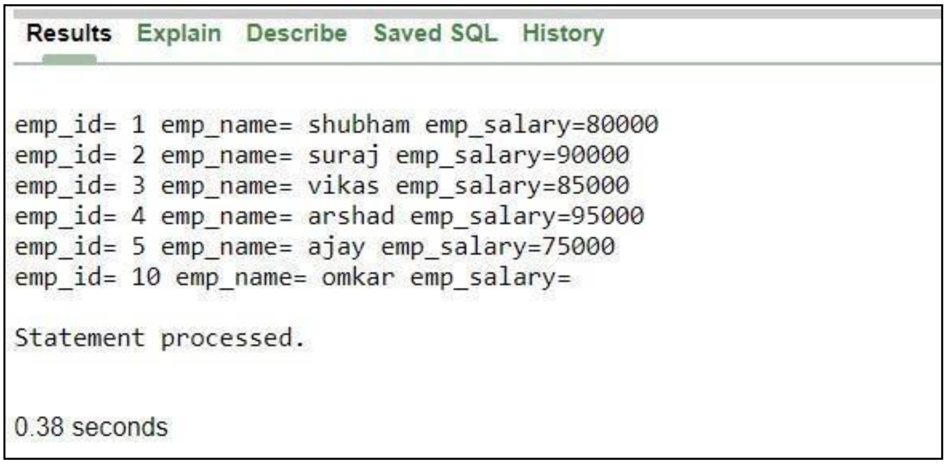
Output:



```
emp_id= 1 emp_name= shubham emp_salary=80000
emp_id= 2 emp_name= suraj emp_salary=90000
emp_id= 3 emp_name= vikas emp_salary=85000
emp_id= 4 emp_name= arshad emp_salary=95000
emp_id= 5 emp_name= ajay emp_salary=75000
emp_id= 10 emp_name= omkar emp_salary=

Statement processed.


0.38 seconds
```

Conclusion:

Name:DineshRameshPawar **Date:**

Class:MCA-I **Roll No.:24**

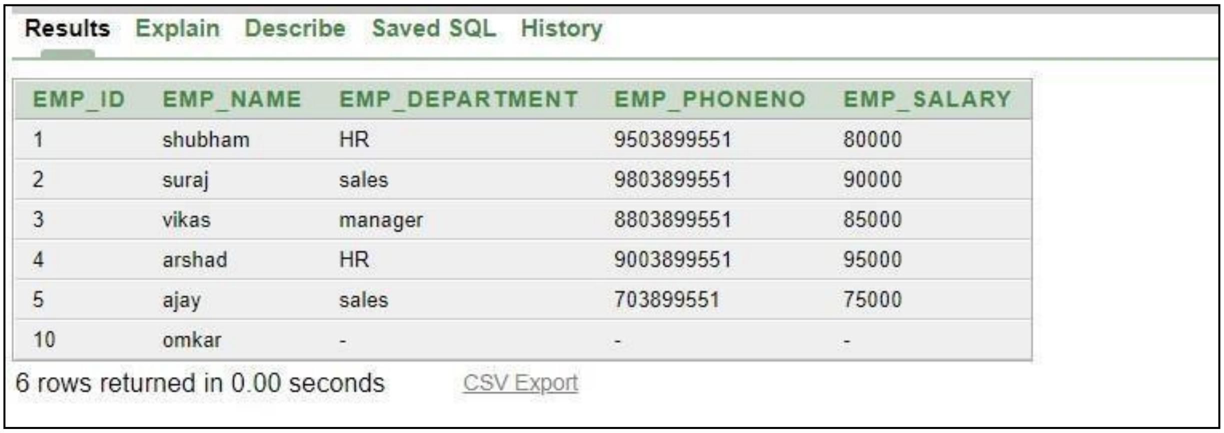
Subject:RDBMS

ExperimentNo:29

Title:WriteaPL/SQLcodetodisplaytheinformationofagivendepartment. **Query:**

Select*fromemp1;

Output:



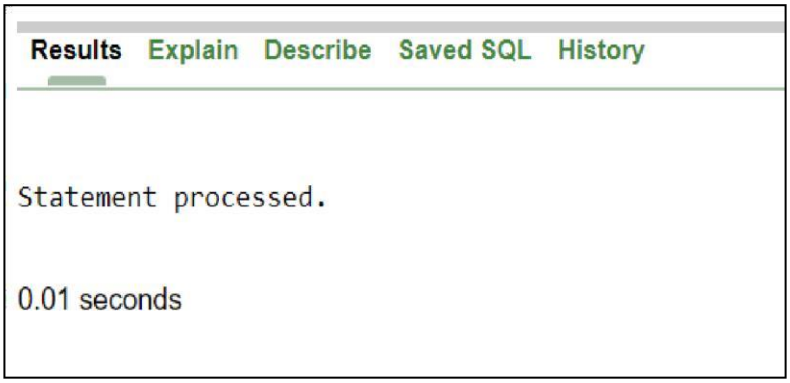
EMP_ID	EMP_NAME	EMP_DEPARTMENT	EMP_PHONENO	EMP_SALARY
1	shubham	HR	9503899551	80000
2	suraj	sales	9803899551	90000
3	vikas	manager	8803899551	85000
4	arshad	HR	9003899551	95000
5	ajay	sales	703899551	75000
10	omkar	-	-	-

6 rows returned in 0.00 seconds

A. Code:

```
declare

cursorcursor2isselectemp_id,emp_name,emp_salaryfromemp1

where emp_department = :emp_department;

name      emp1.emp_name%type;
eid   emp1.emp_id%type;   salary
emp1.emp_salary%type;
begin open cursor2; loop fetch
cursor2intoname,eid,salary;exit
when cursor2%NOTFOUND;

dbms_output.put_line('emp_id='||eid||''||'emp_name='||''||name||''||'emp_salary='||salary);end loop;
close cursor2; end;
```

Output:



```
Statement processed.

0.01 seconds
```

Conclusion:

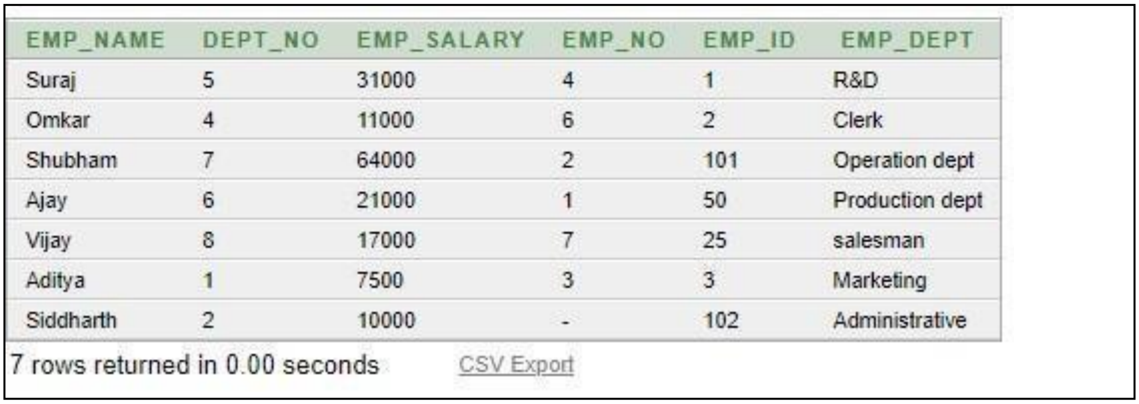
ExperimentNo:30

Title: Write a PL/SQL code to increase the salary of the employees if the post is of ‘clerk’, his orhersalarywillbedoubledandifthepostisof‘salesman’heorshewillgettheincrementof 5%.

Query:

```
Select*fromemp1;
```

Output:



EMP_NAME	DEPT_NO	EMP_SALARY	EMP_NO	EMP_ID	EMP_DEPT
Suraj	5	31000	4	1	R&D
Omkar	4	11000	6	2	Clerk
Shubham	7	64000	2	101	Operation dept
Ajay	6	21000	1	50	Production dept
Vijay	8	17000	7	25	salesman
Aditya	1	7500	3	3	Marketing
Siddharth	2	10000	-	102	Administrative

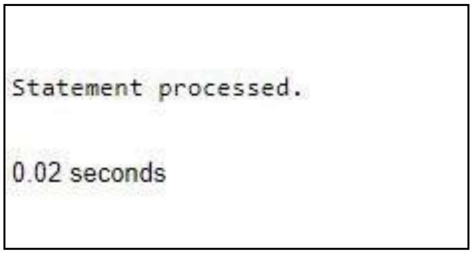
7 rows returned in 0.00 seconds

A. Code:

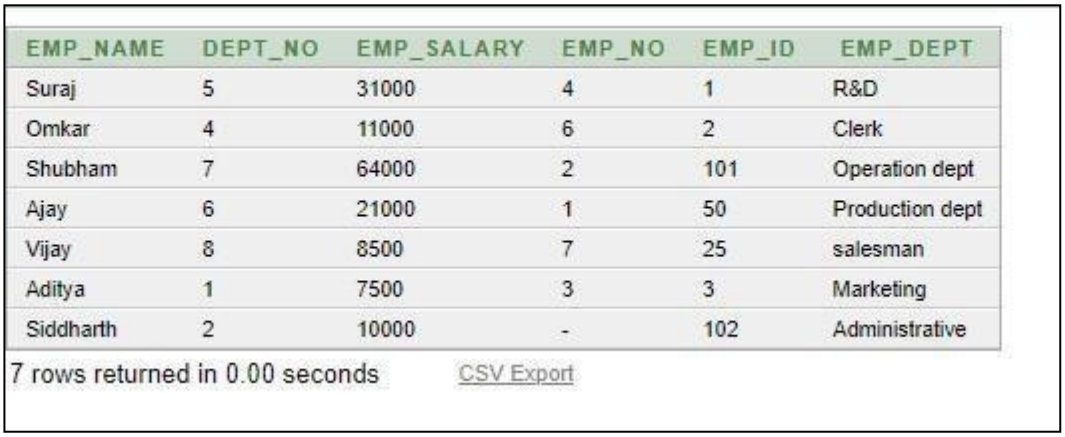
```
declare

cursorcursor3isselectEmp_Id,Emp_Name,Emp_Salary,Emp_DeptfromEmployee;eid
Employee.Emp_Id%type:=2; name Employee.Emp_Name%type; salary
Employee.Emp_Salary%type; post Employee.Emp_Dept%type;

begin open
cursor3;loop

fetchcursor3intoeid,name,salary,post;exit
when cursor3%NOTFOUND;

ifpost='clerk' then
```

```
updateEmployeesetEmp_Salary=Emp_Salary*2whereEmp_Id=eid;elsif
post='salesman' then

updateEmployeesetEmp_Salary=Emp_Salary*0.5whereEmp_Id=eid;end if;
end loop; close cursor3; end;
```

Output:



```
Statement processed.

0.02 seconds
```



EMP_NAME	DEPT_NO	EMP_SALARY	EMP_NO	EMP_ID	EMP_DEPT
Suraj	5	31000	4	1	R&D
Omkar	4	11000	6	2	Clerk
Shubham	7	64000	2	101	Operation dept
Ajay	6	21000	1	50	Production dept
Vijay	8	8500	7	25	salesman
Aditya	1	7500	3	3	Marketing
Siddharth	2	10000	-	102	Administrative

7 rows returned in 0.00 seconds

Conclusion:

Name:DineshRameshPawar **Date:**

Class:MCA-I **Roll No.:24**

Subject:RDBMS

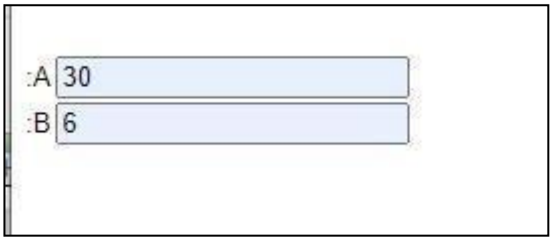
ExperimentNo:31

Title:Writea PL/SQLcodetofind thesumoftwo numbers.

Query:

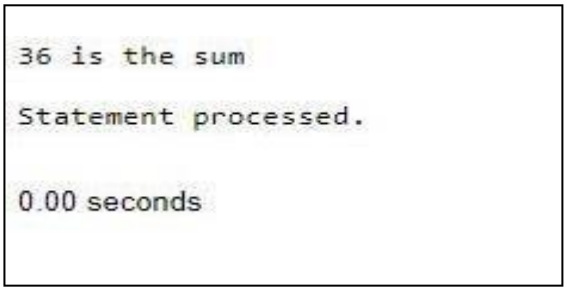
```
DECLARE a
NUMBER;b
NUMBER;c
NUMBER;
BEGIN

a:=:a;

b:=:b;

C:=a+b;

DBMS_OUTPUT.PUT_LINE(c||'isthesum');end;
```

Output:



:A 30

:B 6



```
36 is the sum

Statement processed.

0.00 seconds
```

Conclusion:

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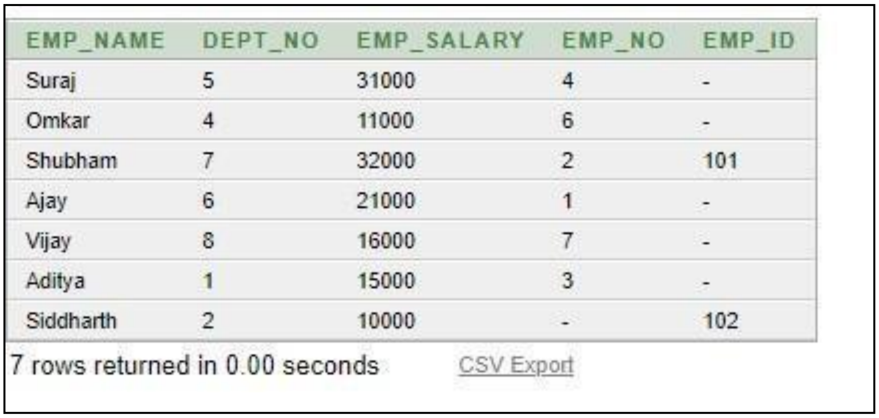
ExperimentNo:32

Title:WriteaPL/SQLcodetofindoutthesalaryofanemployeeifsalaryislessthan18000of employee no.7, then add RS 1000 to the original salary of that employee.

Query:

```
select*fromEmployee;
```

Output:



EMP_NAME	DEPT_NO	EMP_SALARY	EMP_NO	EMP_ID
Suraj	5	31000	4	-
Omkar	4	11000	6	-
Shubham	7	32000	2	101
Ajay	6	21000	1	-
Vijay	8	16000	7	-
Aditya	1	15000	3	-
Siddharth	2	10000	-	102

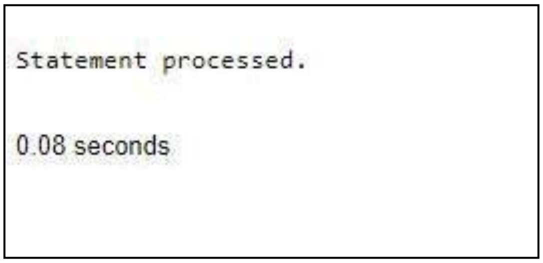
7 rows returned in 0.00 seconds

Code:

```
DECLARE

SalaryNUMBER;

BEGIN

SELECTEmp_SalaryINTOSalaryFROMEmployeeWHEREEmp_No=7; IF

Salary<18000 THEN

GOTOVijay;
```

```
ELSE

DBMS_OUTPUT.PUT_LINE('SALARYIS'||Salary);

END IF;

<<Vijay>>

UPDATEEmployeeSETEmp_Salary=Emp_Salary+1000WHEREEmp_No=7; END;
```

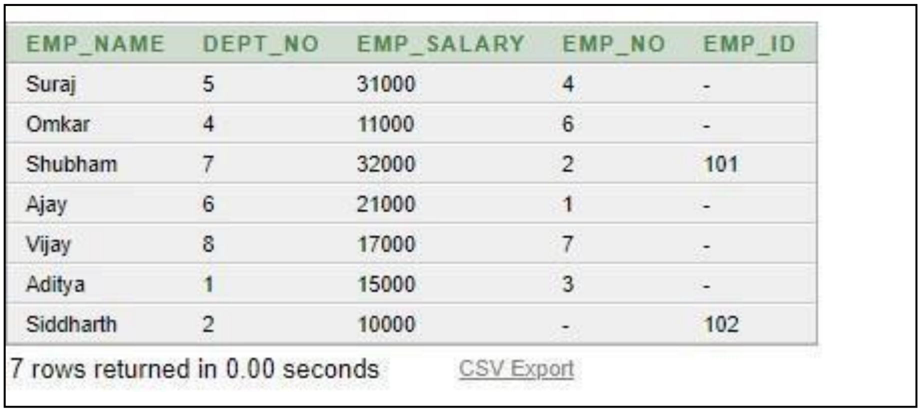
Output:



```
Statement processed.

0.08 seconds
```

select*fromEmployee;

Output:



EMP_NAME	DEPT_NO	EMP_SALARY	EMP_NO	EMP_ID
Suraj	5	31000	4	-
Omkar	4	11000	6	-
Shubham	7	32000	2	101
Ajay	6	21000	1	-
Vijay	8	17000	7	-
Aditya	1	15000	3	-
Siddharth	2	10000	-	102

7 rows returned in 0.00 seconds

Conclusion:

Name:DineshRameshPawar **Date:**

Class:MCA-I **Roll No.:24**

Subject:RDBMS

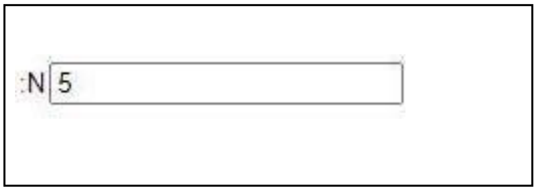
ExperimentNo:33

Title: Write a PL/SQL code to find out factorial of a number.

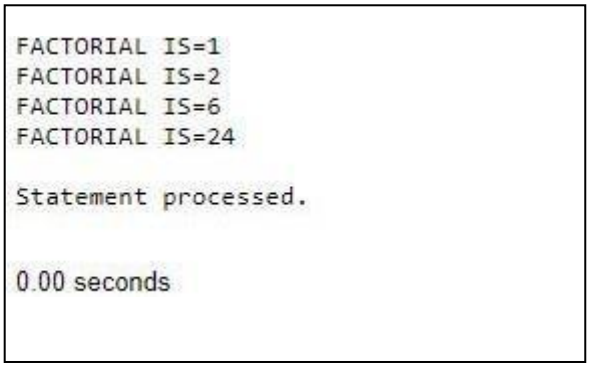
Query:

```
Declare

Nnumber;

I number:=1;

FACTNUMBER:=1;

BEGIN

N:=:N;

WHILEI<NLOOP

FACT:=FACT*I;

I:=I+1;

DBMS_OUTPUT.PUT_LINE('FACTORIALIS='||FACT);

END LOOP;

END;
```

Output:



:N 5



```
FACTORIAL IS=1
FACTORIAL IS=2
FACTORIAL IS=6
FACTORIAL IS=24

Statement processed.


0.00 seconds
```

Conclusion:

Name:DineshRameshPawar **Date:**

Class:MCA-I **Roll No.:24**

Subject:RDBMS

ExperimentNo:34

Title:WriteaPL/SQLcodetoperformarithmeticoperationsonsome data.

Theory:

Query:

```
DECLARE

ANUMBER;
BNUMBER;
CNUMBER;
DNUMBER;
BEGIN

A:=:A;

B:=:B;

D:=:D;

IFD=1THEN

C:=A+B;

ELSIFD=2THEN

C:=A-B;

ELSIFD=3THEN

C:=A*B;

ELSIFD=4THEN

C:=A/B;

DBMS_OUTPUT.PUT_LINE('ENTERVALIDNUMBER');

END IF;

DBMS_OUTPUT.PUT_LINE(C||'ISTHERESULT');

END;
```

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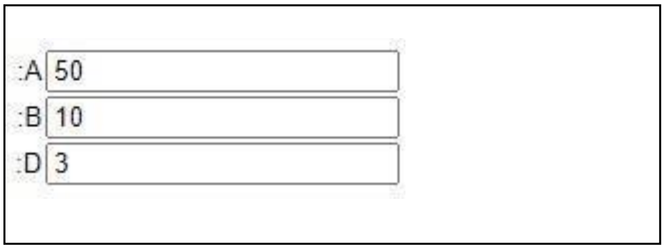
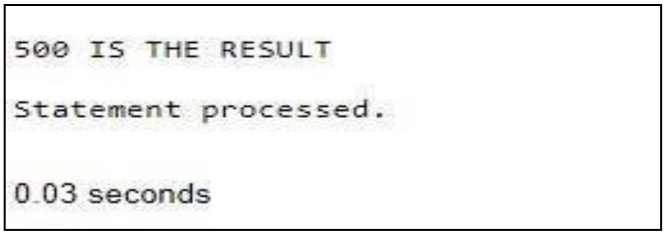
Output:



```
:A 50
:B 10
:D 3
```



```
500 IS THE RESULT

Statement processed.

0.03 seconds
```

Conclusion:

Name:DineshRameshPawar **Date:**

Class:MCA-I **Roll No.:24**

Subject:RDBMS

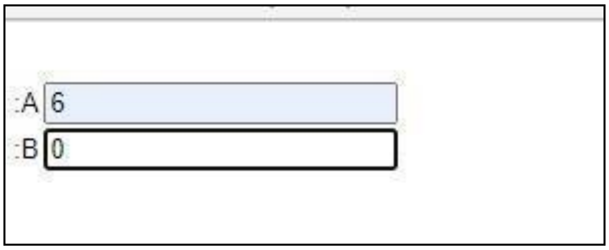
Experiment No: 35

Title:WriteaPL/SQLcodetoremoveprobleminprogram.

Query:

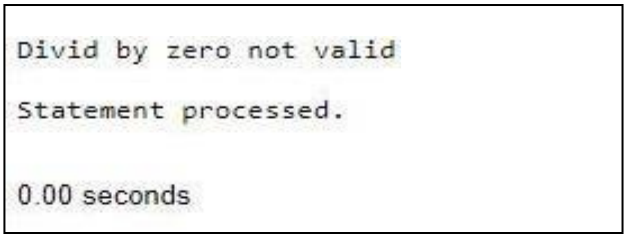
```
Declareanumber;

bnumber;

 c number;

 begina:=:a;b:=:b;c:=a/b;

dbms_output.put_line(''||c);exception
WHEN ZERO_DIVIDE THEN
dbms_output.put_line('Dividbyzeronotvalid');end;
```

Output:



:A 6

:B 0



```
Divid by zero not valid

Statement processed.


0.00 seconds
```

Conclusion:

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