



DEPARTMENT OF ACADEMIC AFFAIRS

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DBMS LAB FINAL WORKSHEET

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Branch: CSE

Section/Group: 6B

Semester: 3rd

Subject Name: DBMS Lab

Q1.

Question 1

10 Points

Consider the database for a college. Write the query for the following.

Insert at least 5 tuples into each table.

- a. List the details of students in the ascending order of date of birth
- b. Display the details of students from computer department
- c. List the faculties in the descending order of salary
- d. Display the total number of students in each department
- e. Display the total number of faculties in each department with salary greater than 25000

Aim/Overview of the practical:

To create table and add the structures stated as above.



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Source Code (screenshot of the query executed):

```
1. → Create table College
(
    Name Varchar2(20),
    DOB date,
    Department Varchar2(20),
    Salary Number
);
Insert into College values ('Rohan', '31-Mar-2001', 'Computer', 20000);
Insert into College values ('Vinn', '07-jun-2000', 'Computer', 26000);
Insert into College values ('Aarif', '01-jun-2001', 'Computer', 30000);
Insert into College values ('Abhi', '06-Nov-2000', 'Sport', 6000);
Insert into College values ('Varun', '14-Sep-2001', 'English', 10000);
Insert into College values ('Nathan', '14-Mar-2001', 'Computer', 23000);
Insert into College values ('Nathan', '14-Mar-2001', 'Computer', 23000);
```

SQL Worksheet

```
1 create table College
2 (
3     Name Varchar2(20),
4     DOB date,
5     Department Varchar2(20),
6     Salary Number
7 );|
```



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SQL Worksheet

```
1 insert into College values('Rohan','31-Mar-2000','Computer',20000);
2 insert into College values('Vinn','07-jun-2000','Computer',26000);
3 insert into College values('Arpit','01-jun-2001','Computer',30000);
4 insert into College values('Abhi','06-Nov-2000','Sport',6000);
5 insert into College values('Vasu','14-Sep-2001','English',10000);
6 insert into College values('Nathan','14-Mar-2001','Computer',23000);
```

1 row(s) inserted.



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Task to be done:

- a. List the details of students in the ascending order of date of birth

a) Select * from College order by DOB;

1 Select * from College order by DOB;			
NAME	DOB	DEPARTMENT	SALARY
Rohan	31-MAR-00	Computer	20000
Vinn	07-JUN-00	Computer	26000
Vasu	14-SEP-00	English	4000
Abhi	06-NOV-00	Sport	6000
Nathan	14-MAR-01	Computer	24000
Amit	01-JUL-01	Computer	20000

b. Display the details of students from computer department

6) Select * from College where Department = 'Computer';

SQL Worksheet

```
1 Select * from College where Department = 'Computer';
```

NAME	DOB	DEPARTMENT	SALARY
Vinn	07-JUN-00	Computer	26000
Arpit	01-JUN-01	Computer	30000
Nathan	14-MAR-01	Computer	24000

[Download CSV](#)

3 rows selected.



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c. List the faculties in the descending order of salary

c) Select * from college order by Salary desc;
d) Select * from

```
1 Select Department from College order by Salary desc;
```

DEPARTMENT
Computer
Computer
Computer
Sport



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d. Display the total number of students in each department

d) Select * from

d) Select * Count (Name) from College;

SQL Worksheet

```
1 Select Count(Name) from College;
```

COUNT (NAME)
5

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e. Display the total number of faculties in each department with salary greater than 25000

e) Select Count (Department) from College where Salary > 25000;

SQL Worksheet

```
1 Select Count(Department) from College where Salary > 25000;
```

COUNT (DEPARTMENT)
2

[Download CSV](#)

Software required:

Oracle Live SQL



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Final Result/Output (after removing the errors): (Screenshot of output without any error)

NAME	DOB	DEPARTMENT	SALARY
Vinn	07-JUN-00	Computer	26000
Vasu	14-SEP-00	English	4000
Abhi	06-NOV-00	Sport	6000
Nathan	14-MAR-01	Computer	24000
Arpit	01-JUN-01	Computer	30000

[Download CSV](#)

5 rows selected.

Learning outcomes (What I have learnt):

1. Learnt about order by clause.
2. Learnt about Count .



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Q2.

Question 2

10 Points

Create a package which includes a function to return a square of a number if it is positive else return an error message to the user.

Aim/Overview of the practical:

To create a package which includes a function to return a square of a number if it is positive else return an error message to the user.



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Source Code (screenshot of the query executed):

1. Create package

2. → Create or replace package Square as

```
function cal(n in number) return number;
end;
```

Create or replace package body Square as

```
function cal(n in number) return number is
    c number;
begin
    if n > 0 then
        c := n * n;
        return (c);
    else
        RAISE_APPLICATION_ERROR (-20500, 'No is not greater than 0');
    end if;
end cal;
end Square;
```



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```
declare
  i number;
begin
  i := square.cal(9);
  dbms_output.put_line('Square of given number is ' || i);
end;
```

SQL WORKSHOP

```
1 create or replace package Square as
2
3   function cal(n in number) return number;
4
5 end;
```

Package created.



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SQL Worksheet

```
1  create or replace package body Square AS
2
3  function cal(n in number) return number IS
4
5  c number;
6
7  begin
8
9  if n>0 then
10
11  c:=n*n;
12
13  return (c);
14
15  else
16
17  RAISE_APPLICATION_ERROR(-20500,'No is not greater than 0');
18
19  end if;
20
21  end cal;
22
23 end Square;
24 |
```

Package Body created.

```
1 declare
2
3 i number;
4
5 begin
6
7 i:=Square.cal(9);
8
9 dbms_output.put_line('Square of given number is'||i);
10
11 end;
12
```

Statement processed.



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Software required:

Oracle Live SQL

Final Result/Output (after removing the errors): (Screenshot of output without any error)

```
Statement processed.  
Square of given number is 81
```

Learning outcomes (What I have learnt):

1. Learnt about Packages and PL/SQL .