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Section:- A3, Roll No.:-002211001115

Assignment:-4b

1)

```
declare
    emp int:=7003;
begin
update employees
set commission=200
where empid=emp and salary<2000;

COMMIT;
end;
```

The screenshot displays a database interface with a table and an SQL worksheet.

**Table:**

EMPID	SALARY	COMMISSION
7001	10000	0
7002	2000	0
7003	1500	0
7000	1000	0

Download CSV

4 rows selected.

**SQL Worksheet:**

```
1 declare
2   emp int:=7003;
3 begin
4   update employees
5   set commission=200
6   where empid=emp and salary<2000;
7
8
9
10 COMMIT;
11 end;
```

Statement processed.

EMPID	SALARY	COMMISSION
7001	10000	0
7002	2000	0
7003	1500	200
7000	1000	0

Download CSV

4 rows selected.

2)

```

declare
cursor cur_emp is
select ename,deptno,sal from emp order by sal desc;

var_emp cur_emp%rowtype;

begin
open cur_emp;
for i in 1..4 loop
fetch cur_emp into var_emp;
dbms_output.put_line(var_emp.ename||' '||var_emp.deptno||' '||var_emp.sal);
end loop;
close cur_emp;
end;

```

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```

3 select ename,deptno,sal from emp order by sal desc;
4
5 var_emp cur_emp%rowtype;
6
7 begin
8 open cur_emp;
9 for i in 1..4 loop
10 fetch cur_emp into var_emp;
11 dbms_output.put_line(var_emp.ename||' '||var_emp.deptno||' '||var_emp.sal);
12 end loop;
13 close cur_emp;
14 end;
15

```

Statement processed.  
KING 10 5000  
FORD 20 3000  
SCOTT 20 3000  
JONES 20 2975

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3)

```
declare
cursor cur_emp is
select ename,deptno,sal from emp where (deptno,sal) in (select deptno,min(sal) from emp
group by deptno);

var_emp cur_emp%rowtype;

begin
open cur_emp;
loop
fetch cur_emp into var_emp;
exit when cur_emp%notfound;
dbms_output.put_line(var_emp.ename||' '||var_emp.deptno||' '||var_emp.sal);
end loop;
close cur_emp;
end;
```

The screenshot shows an SQL Worksheet interface with a sidebar on the left containing navigation links: Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area displays the PL/SQL code from the previous block, with line numbers 21 through 35. Above the code are buttons for Clear, Find, Actions, Save, and Run. Below the code editor, the output shows the message "Statement processed." followed by three lines of data: "SMITH 20 800", "JAMES 30 950", and "MILLER 10 1300". At the bottom of the interface, a footer provides version information: "2023 Oracle - Live SQL 23.4.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0" and includes links to Database Documentation, Ask Tom, Dev Gym, and a note about being built with Oracle APEX, along with Privacy and Terms of Use links.

4)

```
declare
cursor cur_emp is
select deptno,round(avg(sal),2) as rt from emp group by deptno;

var_emp cur_emp%rowtype;

begin
open cur_emp;
loop
fetch cur_emp into var_emp;
exit when cur_emp%notfound;
dbms_output.put_line(var_emp.deptno||' '||var_emp.rt);
end loop;
close cur_emp;
end;
```

The screenshot displays the Oracle SQL Worksheet interface. On the left, a sidebar contains navigation links: Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled 'SQL Worksheet' and contains a PL/SQL block with line numbers 37 to 51. The code is as follows:

```
37 declare
38 cursor cur_emp is
39 select deptno,round(avg(sal),2) as rt from emp group by deptno;
40
41 var_emp cur_emp%rowtype;
42
43 begin
44 open cur_emp;
45 loop
46 fetch cur_emp into var_emp;
47 exit when cur_emp%notfound;
48 dbms_output.put_line(var_emp.deptno||' '||var_emp.rt);
49 end loop;
50 close cur_emp;
51 end;
```

Below the code editor, the output shows the results of the PL/SQL execution:

```
Statement processed.
30 1566.67
10 2916.67
20 2175
```

At the bottom of the interface, a footer provides version information and links: '2023 Oracle - Live SQL 23.4.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym' and 'Built with using Oracle APEX - Privacy - Terms of Use'.

5)

```
create or replace procedure emp_inc is
  cursor cur_emp is
    select ename,job,sal from emp;

  var_emp cur_emp%rowtype;

begin
  open cur_emp;
  loop
    fetch cur_emp into var_emp;
    exit when cur_emp%notfound;

    if var_emp.job='CLERK' then
      dbms_output.put_line(var_emp.ename||' '||var_emp.job||' '||0.1*var_emp.sal);
    elsif var_emp.job='SALESMAN' then
      dbms_output.put_line(var_emp.ename||' '||var_emp.job||' '||0.12*var_emp.sal);
    elsif var_emp.job='MANAGER' then
      dbms_output.put_line(var_emp.ename||' '||var_emp.job||' '||0.15*var_emp.sal);
    elsif var_emp.job='ANALYST' then
      dbms_output.put_line(var_emp.ename||' '||var_emp.job||' '||1000);
    else
      dbms_output.put_line(var_emp.ename||' '||var_emp.job||' '||'No Increment');
    end if;
  end loop;
  close cur_emp;
end emp_inc;
```

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```
110 create or replace procedure emp_inc is
111     cursor cur_emp is
112         select ename,job,sal from emp;
113
114         var_emp cur_emp%rowtype;
115
116     begin
117         open cur_emp;
118         loop
119             fetch cur_emp into var_emp;
120             exit when cur_emp%notfound;
121
122             if var_emp.job='CLERK' then
123                 dbms_output.put_line(var_emp.ename||' '||var_emp.job||' '||0.1*var_emp.sal);
124             elsif var_emp.job='SALESMAN' then
125                 dbms_output.put_line(var_emp.ename||' '||var_emp.job||' '||0.12*var_emp.sal);
126             elsif var_emp.job='MANAGER' then
127                 dbms_output.put_line(var_emp.ename||' '||var_emp.job||' '||0.15*var_emp.sal);
```

Statement processed.  
SMITH CLERK 80

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```
120         exit when cur_emp%notfound;
121
122         if var_emp.job='CLERK' then
123             dbms_output.put_line(var_emp.ename||' '||var_emp.job||' '||0.1*var_emp.sal);
124         elsif var_emp.job='SALESMAN' then
125             dbms_output.put_line(var_emp.ename||' '||var_emp.job||' '||0.12*var_emp.sal);
126         elsif var_emp.job='MANAGER' then
127             dbms_output.put_line(var_emp.ename||' '||var_emp.job||' '||0.15*var_emp.sal);
128         elsif var_emp.job='ANALYST' then
129             dbms_output.put_line(var_emp.ename||' '||var_emp.job||' '||1000);
130         else
131             dbms_output.put_line(var_emp.ename||' '||var_emp.job||' '||'No Increment');
132         end if;
133     end loop;
134     close cur_emp;
135     end emp_inc;
136
137
```

Statement processed.  
SMITH CLERK 80

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```
Statement processed.
SMITH CLERK 80
ALLEN SALESMAN 192
WARD SALESMAN 150
JONES MANAGER 446.25
MARTIN SALESMAN 150
BLAKE MANAGER 427.5
CLARK MANAGER 367.5
SCOTT ANALYST 1000
KING PRESIDENT No Increment
TURNER SALESMAN 180
ADAMS CLERK 110
JAMES CLERK 95
FORD ANALYST 1000
MILLER CLERK 130
```

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6)

```
declare
cursor cur_emp is
select ename,sal from emp;

var_emp cur_emp%rowtype;

begin
open cur_emp;
loop
fetch cur_emp into var_emp;
exit when cur_emp%notfound;
if var_emp.sal<1500 then
dbms_output.put_line(var_emp.ename||' '||var_emp.sal||' '||1.2*var_emp.sal);
else
dbms_output.put_line(var_emp.ename||' '||var_emp.sal||' '||(var_emp.sal+1200));
end if;
end loop;
close cur_emp;
end;
```

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```

77 cursor cur_emp is
78 select ename,sal from emp;
79
80 var_emp cur_emp%rowtype;
81
82 begin
83 open cur_emp;
84 loop
85 fetch cur_emp into var_emp;
86 exit when cur_emp%notfound;
87 if var_emp.sal<1500 then
88 dbms_output.put_line(var_emp.ename||' '||var_emp.sal||' '||1.2*var_emp.sal);
89 else
90 dbms_output.put_line(var_emp.ename||' '||var_emp.sal||' '||(var_emp.sal+1200));
91 end if;
92 end loop;
93 close cur_emp;
94 end;
```

Statement processed.  
SMITH 800 960

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```

Statement processed.
SMITH 800 960
ALLEN 1600 2800
WARD 1250 1500
JONES 2975 4175
MARTIN 1250 1500
BLAKE 2850 4050
CLARK 2450 3650
SCOTT 3000 4200
KING 5000 6200
TURNER 1500 2700
ADAMS 1100 1320
JAMES 950 1140
FORD 3000 4200
MILLER 1300 1560
```

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7)

```

create or replace trigger emp_enter
before insert on emp
for each row
enable
declare
valid number;
begin
select deptno into valid from emp where deptno=:new.deptno;
if valid!=10 and valid!=20 and valid!=30 and valid!=40 then
raise_application_error(-20000,'No such dept exists');
end if;
end;
```



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95

create or replace trigger emp\_enter

96

before insert on emp

97

for each row

98

enable

99

declare

100

valid number;

101

begin

102

select deptno into valid from emp where deptno=:new.deptno;

103

if valid!=10 and valid!=20 and valid!=30 and valid!=40 then

104

raise\_application\_error(-20000,'No such dept exists');

105

end if;

106

end;


107

108

109

Trigger created.

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