

## Assignment 2

Q1.

The screenshot shows the Oracle SQL Developer interface. The 'Worksheet' pane contains a PL/SQL script that drops the 'EMP\_TEMP' table, creates it with columns EMP\_ID, EMP\_NAME, DEP\_ID, and SALARY, and then updates the SALARY for employees in department 50 by a 15% increment. The 'Script Output' pane shows the execution results: 'table EMP\_TEMP dropped.', 'table EMP\_TEMP created.', and 'anonymous block completed'. The 'Columns' pane displays the data for the EMP\_TEMP table, showing 14 rows of employee data.

```
drop table emp_temp;  
create table emp_temp as  
select emp_id, emp_name, dep_id, salary from emp;  
  
declare  
  cursor employee_cur is  
  select emp_id, salary from emp_temp  
  where dep_id = 50;  
  for update;  
  incr_sal number;  
  
begin  
  for employee_rec in employee_cur loop  
    incr_sal := .15;  
    update emp_temp  
    set salary = salary+salary*incr_sal  
    where current of employee_cur;  
  end loop;  
end;
```

EMP_ID	EMP_NAME	DEP_ID	SALARY
68319	KAYLING	1001	6000
66928	BLAZE	3001	2750
67832	CLARE	1001	2550
65646	JONAS	2001	2957
67858	SCARLET	2001	3100
69062	FRANK	2001	3100
63679	SANDRINE	2001	900
64989	ADELYN	3001	1700
65271	WADE	3001	1350
66564	MADDEN	3001	1350
69000	JULIUS	3001	1050
68454	TUCKER	3001	1600
68736	ANDRES	2001	1200
69324	MARVER	1001	1400

Q2.

The screenshot shows the Oracle SQL Developer interface. The 'Worksheet' pane contains a PL/SQL script that declares a cursor 'cur\_mgr' to select employee names and department names where the employee is a manager. The script then loops through the cursor, outputting the names of the managers and their departments. The 'Script Output' pane shows the execution results: 'table EMP\_TEMP dropped.', 'table EMP\_TEMP created.', and 'anonymous block completed'. The 'Columns' pane displays the output of the script, showing the names of the managers and their departments.

```
declare  
  cursor cur_mgr is  
  select emp_name, d.dep_name from employees e  
  inner join department d on d.dep_id = e.dep_id  
  where e.job_name = 'MANAGER';  
  v_mgr cur_mgr%rowtype;  
  
begin  
  open cur_mgr;  
  loop  
    fetch cur_mgr into v_mgr;  
    exit when cur_mgr%notfound;  
    dbms_output.put_line(v_mgr.emp_name || ' : ' || v_mgr.dep_name);  
  end loop;  
  close cur_mgr;  
end;
```

EMP_NAME	DEP_NAME
CLARE	FINANCE
JONAS	AUDIT
BLAZE	MARKETING

Q3.

Oracle SQL Developer: Workable

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Connections x

Workable x

Worksheet Query Builder

```

declare
  cursor department_cur is
    select d.dept_id, dept_name, dept_location, e.emp_name, emp_salary from departments d
    join employees e on (e.dept_id = d.dept_id and e.job_name = 'MANAGER');
  employee_name employees.emp_name%type;
  emp_max_salary employees.salary%type;

begin
  dbms_output.put_line('-----');
  dbms_output.put_line(rpad('Name of the Department', 25) || rpad('Manager', 15) ||
    rpad('Head Office', 15) || 'Highest Earner');
  dbms_output.put_line('-----');
  for emp_dept_cur in department_cur loop
    begin
      select max(salary) into emp_max_salary from employees
      where dept_id = emp_dept_cur.dept_id;
      if emp_max_salary is null then
        employee_name := '...';
      else
        select emp_name into employee_name from employees
        where dept_id = emp_dept_cur.dept_id and salary = emp_max_salary;
      end if;
      dbms_output.put_line(rpad(emp_dept_cur.dept_name, 25) || rpad(employee_name, 15) ||
        rpad(emp_dept_cur.dept_location, 15) || employee_name);
    exception
      when too_many_rows then
        dbms_output.put_line(rpad(emp_dept_cur.dept_name, 25) || rpad(' - More than one employee', 15) ||
          rpad(emp_dept_cur.dept_location, 15) || ' ');
    end;
  end loop;
end;

```

Script Output x

Task completed in 0.006 seconds

anonymous block completed

dbms Output x

Buffer Size: 20000

Name of the Department	Manager	Head Office	Highest Earner
FINANCE	CLARE	SYDNEY	KATLING
AUDIT	JONAS	MELBOURNE	- More than one employee
MARKETING	BLAZE	PERTH	BLAZE

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Q4.

Oracle SQL Developer: Workable

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Connections x

Workable x

Worksheet Query Builder

```

declare
  cursor emp_job_cur is
    select distinct emp_name, job_name from employees;
  count_jobs number(2);

begin
  dbms_output.put_line('-----');
  dbms_output.put_line(rpad('Employee Name', 15) || 'Number of Jobs');
  dbms_output.put_line('-----');
  for employee_list in emp_job_cur loop
    count_jobs := 0;
    case
      when employee_list.job_name = 'ANALYST' then
        count_jobs := 2;
      when employee_list.job_name = 'PRESIDENT' then
        count_jobs := 1;
    else
      count_jobs := 1;
    end;
    dbms_output.put_line(rpad(employee_list.emp_name, 15) || count_jobs);
  end loop;
end;

```

Script Output x

Task completed in 0.074 seconds

anonymous block completed

dbms Output x

Buffer Size: 20000

Employee Name	Number of Jobs
ANDRES	1
KATLING	2
WADE	1
MADDEN	1
BLAZE	1
MARKER	1
SCARLET	2
TUCKER	1
CLARE	1
JONAS	1
FRANK	2
SAMRINE	1
JULIUS	1
ADELYN	1

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Q5.

The screenshot shows the Oracle SQL Developer interface. The main window displays a PL/SQL script in the 'Worksheet' pane. The script creates a temporary table 'emp\_temp' and updates the 'salary' column of the 'employees' table based on the 'hire\_date' column. The script uses a cursor to loop through the 'employees' table and update the 'salary' column. The 'Script Output' pane shows the execution results, including the creation of the temporary table and the completion of the anonymous block.

```

drop table emp_temp;
create table emp_temp as
select * from employees;

declare
cursor employees_cur is
select emp_id, emp_name, trunc(months_between(sysdate, hire_date)/12) expr from emp_temp;
inre_per number(2);

begin
dbms_output.put_line(rpad('Employee ID', 15) || rpad('Name', 25) || 'increment %');
for store_emp_rec in employees_cur loop
inre_per :=
case
when store_emp_rec.expr > 27 then
15
when store_emp_rec.expr > 25 then
10
else
5
end;
update emp_temp
set salary = salary*(salary*inre_per/100)
where emp_id = store_emp_rec.emp_id;
dbms_output.put_line(rpad(store_emp_rec.emp_id,15) || rpad(store_emp_rec.emp_name,25) || inre_per);
end loop;
end;
```

The 'Script Output' pane shows the following results:

```

Task completed in 0.092 seconds
table EMP_TEMP dropped.
table EMP_TEMP created.
anonymous block completed
```

The 'DBMS Output' pane shows the following results:

Employee ID	Name	increment %
68319	KAYLING	10
66928	BLAZE	15
67832	CLARE	15
65646	JONAS	15
67858	SCARLET	5
69062	FRANK	10
63679	SANDRINE	15
64989	ADELIN	15
65271	WADE	15
66564	MADDEN	15
69000	JULIUS	10
68454	TUCKER	15
68736	ANDRES	5
69324	HARKER	10

Q6.

The screenshot shows the Oracle SQL Developer interface. The main window displays a PL/SQL script in the 'Worksheet' pane. The script creates a temporary table 'emp\_temp' and updates the 'salary' column of the 'employees' table based on the 'job\_title' column. The script uses a cursor to loop through the 'employees' table and update the 'salary' column. The 'Script Output' pane shows the execution results, including the creation of the temporary table and the completion of the anonymous block.

```

declare
cursor employees_cur is
select emp_id, emp_name, job_name, hire_date from employees;

begin
dbms_output.put_line(rpad('Employee ID', 15) || rpad('First Name', 15) || rpad('Job Title', 15) || 'First');
for emp_sal_rec in employees_cur loop
dbms_output.put_line(rpad(emp_sal_rec.emp_id, 15) || rpad(emp_sal_rec.emp_name, 15)
|| rpad(emp_sal_rec.job_name, 15) || rpad(emp_sal_rec.hire_date, 15));
end loop;
end;
```

The 'Script Output' pane shows the following results:

```

Task completed in 0.006 seconds
anonymous block completed
```

The 'DBMS Output' pane shows the following results:

Employee ID	First Name	Job Title	First date
68319	KAYLING	PRESIDENT	91-11-18
66928	BLAZE	MANAGER	91-05-01
67832	CLARE	MANAGER	91-06-09
65646	JONAS	MANAGER	91-04-02
67858	SCARLET	ANALYST	97-04-19
69062	FRANK	ANALYST	91-12-03
63679	SANDRINE	CLERK	90-12-18
64989	ADELIN	SALESMAN	91-02-20
65271	WADE	SALESMAN	91-02-22
66564	MADDEN	SALESMAN	91-09-28
69000	JULIUS	CLERK	91-12-03
68454	TUCKER	SALESMAN	91-09-08
68736	ANDRES	CLERK	97-05-23
69324	HARKER	CLERK	92-01-23

Q7.

Oracle SQL Developer: Workable

File Edit View Navigate Run Versioning Tools Help

Connections x

Workable x

Worksheet Query Builder

```

declare
  cursor department_cur is
    select dep_id, dep_name, max(salary) maxsalary from employees
    join department using (dep_id)
    group by dep_id, dep_name;
  emp_first_name employees.emp_name%type;
begin
  dbms_output.put_line('-----');
  dbms_output.put_line(rpad('Name of the Department', 25) || rpad('Highest Salary', 25));
  dbms_output.put_line('-----');
  for emp_dept_cur in department_cur loop
    begin
      select emp_name into emp_first_name from employees
      where dep_id = emp_dept_cur.dep_id and salary = emp_dept_cur.maxsalary;
      dbms_output.put_line(rpad(emp_dept_cur.dep_name, 25) || rpad(emp_first_name, 25));
    exception
      when too_many_rows then
        dbms_output.put_line(rpad(emp_dept_cur.dep_name, 25) || ' - More than one employee');
    end;
  end loop;
end;

```

Script Output x

Task completed in 0.009 seconds

anonymous block completed

DBMS Output x

Name of the Department	Highest Salary
FINANCE	KAYLING
AUDIT	- More than one employee
MARKETING	BLAZE

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Q8.

Oracle SQL Developer: Workable

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Connections x

Workable x

Worksheet Query Builder

```

declare
  cursor emp_cur (def_job_name varchar2 := 'MANAGER') is
    select d.dep_name, e.emp_name manager, d.dep_location from department d, employees e
    where d.dep_id = e.dep_id and e.job_name = def_job_name
    order by d.dep_id;
  procedure dep_cur is
    depname department.dep_name%type;
    dep_mgr employees.emp_name%type;
    dep_in_city department.dep_location%type;
begin
  loop
    fetch emp_cur into depname, dep_mgr, dep_in_city;
    exit when emp_cur%notfound;
    dbms_output.put_line(rpad(depname, 25) || rpad(dep_mgr, 15) || rpad(dep_in_city, 15));
  end loop;
end dep_cur;

begin
  dbms_output.put_line('DEPARTMENTS AT :');
  dbms_output.put_line('-----');
  dbms_output.put_line(rpad('Department', 25) || rpad('Manager', 15) || rpad('City', 15));
  dbms_output.put_line('-----');
  open emp_cur();
  dep_cur;
  close emp_cur;
end;

```

Script Output x

Task completed in 0.005 seconds

anonymous block completed

DBMS Output x

Department	Manager	City
FINANCE	CLARE	SYDNEY
AUDIT	JONAS	MELBOURNE
MARKETING	BLAZE	PERTH

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Q9.

Oracle SQL Developer: Workable

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Connections x

Workable x

Worksheet Query Builder

```

declare
cursor employees_cur is
select emp_id, emp_name, job_name, hire_date from employees;
begin
dbms_output.put_line(rpad('Employee Name', 15) || rpad('Job Title', 15) || 'Starting Date');
for employee_rec in employees_cur loop
dbms_output.put_line(rpad(employee_rec.emp_name, 15) ||
rpad(employee_rec.job_name, 15) || employee_rec.hire_date);
end loop;
end;
```

DBMS Output x

Employee Name	Job Title	Starting Date
KAYLING	PRESIDENT	91-11-18
BLAZE	MANAGER	91-05-01
CLARE	MANAGER	91-06-09
JONAS	MANAGER	91-04-02
SCARLET	ANALYST	97-04-19
FRANK	ANALYST	91-12-03
SANDYLINE	CLERK	90-12-18
ADRYN	SALESMAN	91-02-20
WADE	SALESMAN	91-02-22
MADDEN	SALESMAN	91-09-28
JULIUS	CLERK	91-12-03
TUCKER	SALESMAN	91-09-08
ANDRES	CLERK	97-05-23
MARKER	CLERK	92-01-23

Script Output x

Task completed in 0.005 seconds

anonymous block completed

Line 12 Column 6 | Insert | Modified | Windows: CRAP, Editing

Q10.

Oracle SQL Developer: Workable

File Edit View Navigate Run Versigning Tools Help

Connections x

Workable x

Worksheet Query Builder

```

declare
cursor cur_for_dep is
select d.dep_id, d.dep_name, d.dep_location, e.emp_name from department d
left join employees e on (e.dep_id = d.dep_id)
where job_name = 'MANAGER';
function count_for_emp (p_deptid number)
return number
is
count_of_emp number(3);
begin
select count(*) into count_of_emp from employees
where dep_id = p_deptid;
return count_of_emp;
end;
begin
dbms_output.put_line(rpad('Department Name', 20) || rpad('Department Head', 20)
|| rpad('Head office', 20) || 'Number of Employees');
for rows_of_dep in cur_for_dep loop
dbms_output.put_line(rpad(rows_of_dep.dep_name, 20) || rpad(rows_of_dep.emp_name, 20)
|| rpad(rows_of_dep.dep_location, 20) || count_for_emp(rows_of_dep
end loop;
end;
```

DBMS Output x

Department Name	Department Head	Head office	Number of Employees
FINANCE	CLARE	SYDNEY	3
AUDIT	JONAS	MELBOURNE	5
MARKETING	BLAZE	PERTH	6

Script Output x

Task completed in 0.02 seconds

anonymous block completed

Line 25 Column 5 | Insert | Modified | Windows: CRAP, Editing