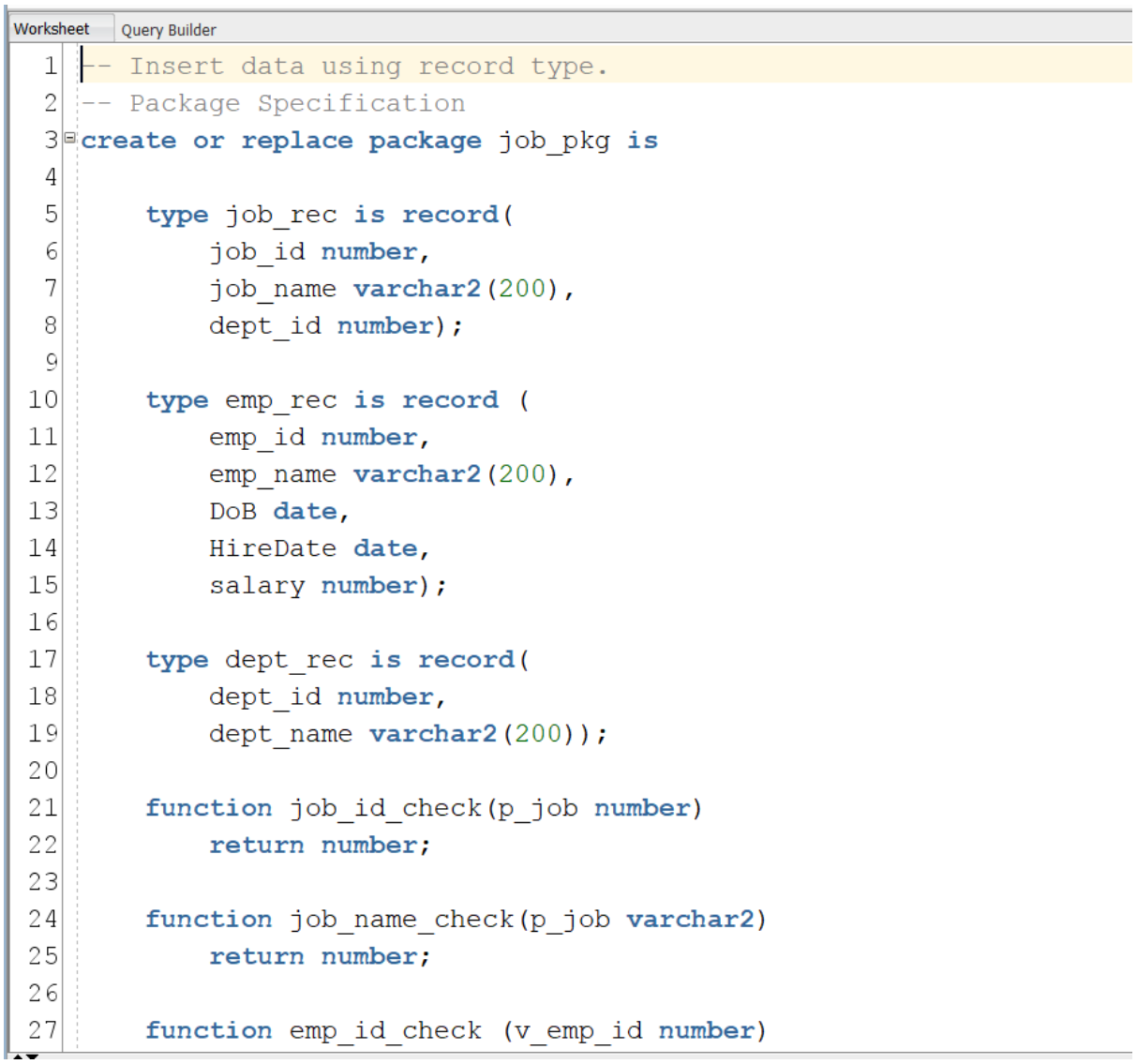
-- Insert data using record type.

-- Package Specification



```
Worksheet  Query Builder
1  -- Insert data using record type.
2  -- Package Specification
3  create or replace package job_pkg is
4
5      type job_rec is record(
6          job_id number,
7          job_name varchar2(200),
8          dept_id number);
9
10     type emp_rec is record (
11         emp_id number,
12         emp_name varchar2(200),
13         DoB date,
14         HireDate date,
15         salary number);
16
17     type dept_rec is record(
18         dept_id number,
19         dept_name varchar2(200));
20
21     function job_id_check(p_job number)
22         return number;
23
24     function job_name_check(p_job varchar2)
25         return number;
26
27     function emp_id_check (v_emp_id number)
```

```
28          return number;
29
30      function emp_name_check (v_emp_name varchar2)
31          return boolean;
32
33      function age_check (v_dob date)
34          return boolean;
35
36      function hire_date_check (v_hire_date date)
37          return boolean;
38
39      function dept_no_check (v_dept_no number)
40          return number;
41
42      function dept_name_check(v_dept_name varchar2)
43          return number;
44
45      procedure job_insert(p_job job_rec);
46      procedure emp_insert(p_emp emp_rec);
47      procedure dept_insert(p_dept dept_rec);
48
49  end job_pkg;
50
```

Package body

```
-- Package body
set serveroutput on;
create or replace package body job_pkg
is

    function job_id_check(p_job number)
        return number
        is
        v_id number;
        begin
            select count(*) into v_id from job where job_id = p_job;
            return v_id;
        end;

    function job_name_check(p_job varchar2)
       return number
       is
       v_job varchar2(200);
       begin
            select count(*) into v_job from job where job_name = p_job;
            return v_job;
        end;

    function emp_id_check (v_emp_id number)
        return number
        is
        v_empid number;
```

```
        begin
            select count(*) into v_empid from emp2 where emp_id = v_emp_id;
           return v_empid;
        end;

    function emp_name_check (v_emp_name varchar2)
        return boolean
        is
        begin
            if length(v_emp_name) >= 3 then
                return true;
            else
                return false;
            end if;
        end;

    function age_check (v_dob date)
        return boolean
        is
        v_age number;
        begin
            select trunc(months_between(to_date(to_char(sysdate,'dd-mm-yyyy'),'DD-MM-YYYY'),
                           (to_date(v_dob,'DD-MM-YYYY')))/12) into v_age from dual;
            if v_age >21 then
                return true;
            else
                return false;
```

```
            end if;
        end;

    function hire_date_check (v_hire_date date)
        return boolean
        is
        v_date varchar2(50);
        begin
            select to_char(v_hire_date,'FMDAY') into v_date from dual;
            if v_date = 'SUNDAY' then
                return false;
            else
                return true;
            end if;
        end;

    function dept_no_check (v_dept_no number)
        return number
        is
        v_deptno number;
        begin
            select count(*) into v_deptno from dept1 where dept_id = v_dept_no;
           return v_deptno;
        end;

    function dept_name_check(v_dept_name varchar2)
        return number
        is
        v_dept number;
        begin
            select count(*) into v_dept from dept1 where dept_name = v_dept_name;
                return v_dept;
        end;



procedure job_insert(p_job job_rec)
is
s_job number;
begin
s_job := seq_job.nextval;
        if job_name_check(p_job.job_name) = 0 then
            insert into job1 values (s_job,
                                     p_job.job_name,
                                     p_job.dept_id);
        else
            dbms_output.put_line('Job name already exists.');
        end if;
end job_insert;

procedure dept_insert(p_dept dept_rec)
is
```

```
107  s_dept number;
108  begin
109  s_dept := seq_dept.nextval;
110          if dept_name_check(p_dept.dept_name) = 0 then
111              insert into dept1 values (s_dept,
112                                        p_dept.dept_name);
113          else
114              dbms_output.put_line('Dept name already exists.');
115          end if;
116  end dept_insert;
117
118 procedure emp_insert(p_emp emp_rec)
119  is
120  s_emp number;
121  begin
122  s_emp := seq_emp.nextval;
123      if emp_name_check(p_emp.emp_name) = true then
124          if age_check(p_emp.DoB) = true then
125              if hire_date_check(p_emp.Hiredate) = true then
126                  insert into emp1 values(s_emp,
127                                          p_emp.emp_name,
128                                          p_emp.DoB,
129                                          p_emp.Hiredate,
130                                          p_emp.salary);
131              else
```

```
131              else
132                  dbms_output.put_line('Hire Date is not an sunday, Please change the date.');
133              end if;
134          else
135              dbms_output.put_line('Employye age is must be 21 years above.');
136          end if;
137      else
138          dbms_output.put_line('Employye name must be more then 3 characters.');
139      end if;
140  end emp_insert;
141
142  end job_pkg;
```

Package calling

```
1  --Package calling
2  set serveroutput on;
3
4  declare
5      v_dept job_pkg.dept_rec;
6  begin
7      v_dept.dept_name := 'Testing';
8      job_pkg.dept_insert(v_dept);
9      v_dept.dept_name := 'Sales';
10     job_pkg.dept_insert(v_dept);
11     v_dept.dept_name := 'Markting';
12     job_pkg.dept_insert(v_dept);
13     v_dept.dept_name := 'Digital Markting';
14     job_pkg.dept_insert(v_dept);
15     v_dept.dept_name := 'Accounting';
16     job_pkg.dept_insert(v_dept);
17 end;
18 /
19 select * from dept1;
20
21
22 declare
23     v_job job_pkg.job_rec;
24
25 begin
26     v_job.job_name := 'SQL Developer';
27     v_job.dept_id := 10;
```

```
28      job_pkg.job_insert(v_job);
29      v_job.job_name := 'PL/SQL Developer';
30      v_job.dept_id := 10;
31      job_pkg.job_insert(v_job);
32      v_job.job_name := 'EBS Developer';
33      v_job.dept_id := 10;
34      job_pkg.job_insert(v_job);
35      v_job.job_name := 'Cloud Developer';
36      v_job.dept_id := 10;
37      job_pkg.job_insert(v_job);
38      v_job.job_name := 'APEX Developer';
39      v_job.dept_id := 10;
40      job_pkg.job_insert(v_job);
41      v_job.job_name := 'Accounting';
42      v_job.dept_id := 20;
43      job_pkg.job_insert(v_job);
44      v_job.job_name := 'Cleark';
45      v_job.dept_id := 20;
46      job_pkg.job_insert(v_job);
47      v_job.job_name := 'QA Testing';
48      v_job.dept_id := 30;
49      job_pkg.job_insert(v_job);
50      v_job.job_name := 'Manual Tester';
51      v_job.dept_id := 30;
52      job_pkg.job_insert(v_job);
53      v_job.job_name := 'Assit_Manager';
```

```
54      v_job.dept_id := 40;
55      job_pkg.job_insert(v_job);
56  end;
57  /
58
59  declare
60      v_emp job_pkg.emp_rec;
61  begin
62      v_emp.emp_name := 'Rajesh';
63      v_emp.DoB := '11-10-1999';
64      v_emp.hiredate := '05-06-2023';
65      v_emp.salary := 25000;
66      job_pkg.emp_insert(v_emp);
67
68      v_emp.emp_name := 'Naveen';
69      v_emp.DoB := '28-02-1998';
70      v_emp.hiredate := '01-02-2021';
71      v_emp.salary := 20000;
72      job_pkg.emp_insert(v_emp);
73
74      v_emp.emp_name := 'Janu';
75      v_emp.DoB := '05-07-1999';
76      v_emp.hiredate := '20-05-2021';
77      v_emp.salary := 35000;
78      job_pkg.emp_insert(v_emp);
79
80      v_emp.emp_name := 'Anwar';
```

```
    v_emp.emp_name := 'Anwar';
    v_emp.DoB := '30-06-1999';
    v_emp.hiredate := '06-12-2023';
    v_emp.salary := 20000;
    job_pkg.emp_insert(v_emp);
end;
/
```

Output

```
88 select * from dept1;
89 select * from job1;
90 select * from emp1;
91
```

Query Result | Query Result 1 | Query Result 2

SQL | All Rows Fetched: 6 in 0.002 seconds

	DEPT_ID	DEPT_NAME
1	10	Development
2	20	Accounting
3	30	Testing
4	40	Sales
5	50	Markting
6	60	Digital Markting

```
88 select * from dept1;
89 select * from job1;
90 select * from emp1;
91
```

Query Result | Query Result 1 | Query Result 2

SQL | All Rows Fetched: 10 in 0.002 seconds

	JOB_ID	JOB_NAME	DEPT_ID
1	100	SQL Developer	10
2	101	PL/SQL Developer	10
3	102	EBS Developer	10
4	103	Cloud Developer	10
5	104	APEX Developer	10
6	105	Accounting	20
7	107	QA Testing	30
8	108	Manual Tester	30
9	109	Sales Manager	40
10	110	Assit Manager	40


```
88 select * from dept1;
89 select * from job1;
90 select * from emp1;
91
```


Query Result | Query Result 1 | Query Result 2

SQL | All Rows Fetched: 4 in 0.006 seconds

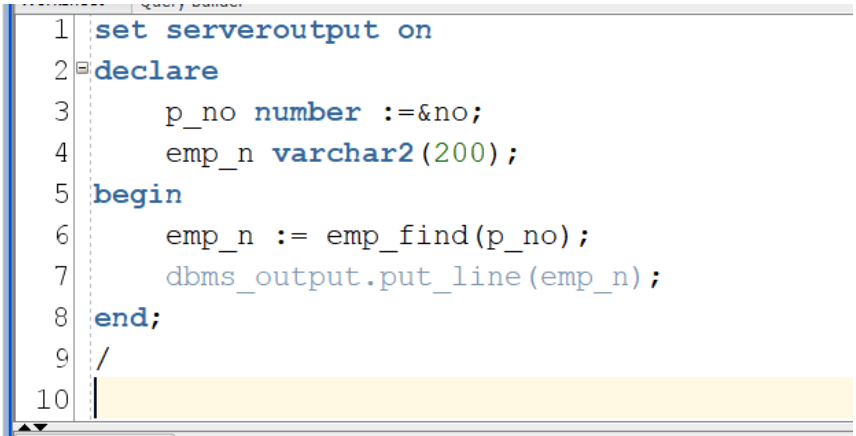
	EMP_ID	EMP_NAME	DOB	HIREDATE	SALARY
1	1	Rajesh	11-10-99	05-06-23	25000
2	5	Naveen	28-02-98	01-02-21	20000
3	6	Janu	05-07-99	20-05-21	35000
4	7	Anwar	30-06-99	06-12-23	20000

Emp names according to their manager names

```
set serveroutput on;

create or replace function emp_find (p_emp_id number)
    return varchar2
is
    emp_name varchar2(200);
begin
    select listagg(b.ename, ',')
    into emp_name
    from emp a,emp b
    where a.empno = b.mgr
    and a.job = 'MANAGER'
    and a.empno = p_emp_id;
    return emp_name;
end;
/
```

Calling



```
set serveroutput on
declare
    p_no number :=&no;
    emp_n varchar2(200);
begin
    emp_n := emp_find(p_no);
    dbms_output.put_line(emp_n);
end;
/
```

Script Output

Task completed in 1.631 seconds

```
end;

new:declare
    p_no number :=7698;
    emp_n varchar2(200);
begin
    emp_n := emp_find(p_no);
    dbms_output.put_line(emp_n);
end;
ALLEN,WARD,MARTIN,TURNER,JAMES


PL/SQL procedure successfully completed.
```