PL*SQL

Exercise 5

1. Create a table SCHOOL which has the following structure:-

Roll _no	Number	4
Name	Varchar2	20
Section	Number	4
Class	Character	7
Oracle	Number	3
Dev_2000	Number	3

Fill in the following sample data:-

Roll no.	Name	Section	Class	Oracle	Dev_2000
1	Mukesh Khanna	9012	Working	55	80
2	Rajiv Chawala	9025	Student	75	85
3	Pramila Bordes	9025	Working	45	45
4	Nitish Bharadwaj	9025	Working	67	75
5	Anita Sood	9012	Student	86	72
6	Kalyani Deshmukh	9012	Working	55	65
7	Rakesh Surana	9025	Working	95	95
8	Alok Kumar Nath	9025	Working	25	40
9	Sushmita Bannerjee	9025	Student	73	83
10	Pranay Aiyyer	9012	Student	62	85
11	Shalini Patel	9012	Student	35	00
12	Ketan Tendulkar	9012	Working	83	98
13	Arun Trivedi	9012	Working	67	53
14	Victor D'souza	9025	Working	59	63
15	Sarah Ahmed	9025	Student	65	73

Create another table with the following structure:-

Roll_no	Number	4
Total	Number	3
Percent	Number	5,2
Grade	Varchar2	10

Insert into this table the total marks, percentage and grades of the respective students. The rules for grades are as follows:-

For working persons

Percentage	Grade
< 50 %	FAIL
>= 50 %	PASS

For students

Percentage	Grade
< 40%	FAIL
40 - 49.99%	C
50 – 59.99%	B
60 – 79.99%	A
>= 80%	HONOURS

```
declare

cursor c1_227 is select * from school_227;

v_total PLS_INTEGER;

v_per PLS_INTEGER;

v_grade varchar2(10);

begin


for rec in c1_227

loop

v_total:=rec.oracle+rec.dev_2000;

v_per:=v_total/2;

if rec.class='working' then

  if v_per<50 then

    v_grade:='Fail';

  else
```

```
      v_grade:='Pass';
    end if;
  else
    if v_per<40 then
      v_grade:='Fail';
    elsif v_per>=40 AND v_per<50 then
       v_grade:='C';
    elsif v_per>=50 AND v_per<60 then
       v_grade:='B';
    elsif v_per>=60 AND v_per<80 then
       v_grade:='A';
    else
       v_grade:='HONOURS';

    end if;
  end if;

  insert into result values(rec.roll_no,v_total,v_per,v_grade);
  end loop;
  end;
```

2. The CUSTOMER table of a state electricity board consists of the following fields:-

Meter Number	Varchar2	4
Meter Type	Character	1
Previous Reading	Number	5

Current Reading	Number	5
Customer Type	Character	1
Last Bill payment	Character	1 (values could be ‘Y’ or ‘N’)

There are two types of meters viz. 3- phase or 1-phase coded as ‘T’ or ‘S’ respectively. There are 4 types of customers viz. Agricultural Industrial, Commercial and Residential with coeds ‘A’ , ‘I’, ‘C’ and ‘R’ respectively.

Formulae:-
Units used = Current Reading – Previous Reading
Rate =Rs.1/ 1.25/ 1.50/ 1.30 for A/I/C/R respectively.
Amount = rate*units used
Surcharge = 5% for single phase
10% for 3 phase
Excise = 30% of (amount +Surcharge)
Net = Amount +Surcharge + Excise

Write a block to calculate the bill for each customer. The program should insert the Meter no., Units used, Rate, Amount, Surcharge, Excise duty and Net for each customer into some other suitable table. Also, at the end, it should insert the total Amount, Surcharge, Excise and Net into some other table.

```
create table record_227(
amount number(10,2),srchrg number(10,2),excs_dty number(10,2),net number(10,2))

create table bill_227(mtr_no varchar(4),unts number(8,0),rate number(10,2),

amount number(10,2),srchrg number(10,2),excs_dty number(10,2),net number(10,2))




declare

cursor c1 is select * from customer_227;

v_rate number(10,2);

v_u number(8,0);

v_amt number(10,2);

v_sur number(10,2);
```

```
v_ex number(10,2);
v_net number(10,2);

begin
for rec in c1
loop
v_u:=rec.crr_rd-rec.prv_rd;
if rec.cus_type='A' then
      v_rate:=1;
      v_amt:=v_rate*v_u;
elsif rec.cus_type='I' then
      v_rate:=1.25;
      v_amt:=v_rate*v_u;
elsif rec.cus_type='C' then
      v_rate:=1.50;
      v_amt:=v_rate*v_u;
else
      v_rate:=1.30;
      v_amt:=v_rate*v_u;
end if;

if rec.mtr_type='s' then
  v_sur:=.05*v_amt;
```

```
else
  v_sur:=.10*v_amt;
end if;
  v_ex:=.3*(v_amt+v_sur);
  v_net:=v_amt+v_sur+v_ex;

insert into bill_227 values(rec.mtr_no,v_u,v_rate,v_amt,v_sur,v_ex,v_net);
insert into record_227 values(v_amt,v_sur,v_ex,v_net);

end loop;
end;
```

3. A table consists of the following fields:-

Invoice Number	Varchar2	4
Invoice Date	Date	
Customer Code	Number	1
Product Code	Number	1
Quantity Sold	Number	3

There are ten customers with codes 0 to 9 and five products with codes 0 to 4. The rates of products are Rs. 15, 35, 42, 51 and 60 respectively. Write a program to find the total purchase in Rs. of each customer and total sale of each product using this table and insert these values in two other tables.

```
declare

cursor c1 is select * from empl_227;
v_amt number(6,2);
```

```
TYPE v_cus IS TABLE OF NUMBER INDEX BY VARCHAR2(20);
v_arr v_cus;
v_arr1 v_cus;

begin

for i in 0..9
loop
v_arr(i):=0;
end loop;

for i in 0..4
loop
v_arr1(i):=0;
end loop;


for var in c1
loop
  if var.p_code=0 then
    v_amt:=15*var.qnty_sold;
    v_arr(var.cus_code):=v_arr(var.cus_code)+v_amt;
    v_arr1(var.p_code):=v_arr1(var.p_code)+v_amt;
```

```
elsif var.p_code=1 then
  v_amt:=35*var.qnty_sold;
  v_arr(var.cus_code):=v_arr(var.cus_code)+v_amt;
  v_arr1(var.p_code):=v_arr1(var.p_code)+v_amt;

elsif var.p_code=2 then
  v_amt:=42*var.qnty_sold;
  v_arr(var.cus_code):=v_arr(var.cus_code)+v_amt;
  v_arr1(var.p_code):=v_arr1(var.p_code)+v_amt;

elsif var.p_code=3 then
  v_amt:=51*var.qnty_sold;
  v_arr(var.cus_code):=v_arr(var.cus_code)+v_amt;
  v_arr1(var.p_code):=v_arr1(var.p_code)+v_amt;

elsif var.p_code=4 then
  v_amt:=60*var.qnty_sold;
  v_arr(var.cus_code):=v_arr(var.cus_code)+v_amt;
  v_arr1(var.p_code):=v_arr1(var.p_code)+v_amt;
```

```
  else
    dbms_output.put_line('Invalid');

  end if;

end loop;

for i in 0..9
loop
insert into c_amt values(i,v_arr(i));
end loop;
for i in 0..4
loop
insert into p_amt values(i,v_arr1(i));
end loop;
end;
```

4. Create a table EMPLOYEE with the following columns:-

Employee No.	Varchar2	4
Employee Name	Varchar2	30
Designation	Varchar2	10
Category	Character	1
Basic Salary	Number	4

Category may be ‘J’, ‘S’, or ‘W’ for Jr. officers, Sr. officers or Worker category.

Formulae:-
DA = 35% of Basic Salary correct up to paise.
HRA = 15% of Basic Salary subject to a maximum of Rs. 250/1000/30000 for categories W/J/S respectively.
Gross = Basic Salary +DA +HRA

Output the Employee Number and the Gross for each employee in a separate table.

```
declare

cursor c1 is select * from employ_227;

v_da number(10,2);

v_hra number(10,2);

v_grs number(10,2);

begin

for i in c1

loop

v_da:=.35*i.b_sal;

v_hra:=.15*i.b_sal;

if i.ctgy='W' then

  if v_hra>250 then

  v_hra:=250;

  end if;

elsif i.ctgy='J' then

    if v_hra>1000 then
```

```
    v_hra:=1000;
    end if;
elsif i.ctgy='S' then
    if v_hra>30000 then
    v_hra:=30000;
    end if;
else
    dbms_output.put_line('Invalid');
end if;
v_grs:=v_hra+v_da+i.b_sal;
insert into e_pay values(i.emp_no,v_grs);
end loop;
end;
```