

ASSIGNMENT NO.:- 10

Problem Statement:

1. Write a PL/SQL block that will add 2% interest of all customer of a bank for active account.

i) For updating Acc_details updating, you have to use Cursor.

Source Code:

```
set serveroutput on
declare
    cursor add_interest
    is
        select Acc_no, Total_amt from Acc_details where Acc_status='A';
        varaccn Acc_details.Acc_no%type;
        varamt Acc_details.Total_amt%type;
begin
    open add_interest;
    if add_interest%isopen then
        loop
            fetch add_interest into varaccn, varamt;
            exit when add_interest%notfound;
            update Acc_details set Total_amt = varamt*1.02 where Acc_no=varaccn;
            dbms_output.put_line('The total amount of account_no: '||varaccn||' is
updated from '||varamt||' to '||varamt*1.02);
        end loop;
    else
        dbms_output.put_line('Cursor not opened. ');
    end if;
    close add_interest;
    commit;
end;
/
```

Output:

The total amount of account_no: 001 is
updated from 11000 to 11220
The total amount of account_no: 002 is
updated from 1000 to 1020
The total amount of account_no: 003 is
updated from 10000 to 10200

PL/SQL procedure successfully completed.

SQL> select * from Acc_details;

| ACC_NO | NAME | ADDRESS |
|-----------|--------------|----------------------------------|
| DOB | S | CONTACT_NO LAST_TRAN TOTAL_AMT A |
| 001 | AMIT | CK-256 |
| 12-JAN-12 | M 9836793258 | 13-JUN-12 11220 A |
| 002 | SUMIT | AB-125 |
| 10-FEB-12 | M 9830073258 | 13-JAN-12 1020 A |
| 003 | RAMIT | BG-350 |
| 25-JAN-13 | M 9877363258 | 15-JUL-12 10200 A |

Problem Statement:

1. Write a PL/SQL block that will add 2% interest of all customer of a bank for active account.

- ii) For entry in Transaction_Acc, you have to use procedure.
- iii) For Generation Transaction_id, you have to use function.

Source Code:

```
set serveroutput on
create or replace function Max_id return number
is
var_id number(4);
begin
select max(Transaction_id) into var_id from Transactions_acc;
if var_id is null then
    var_id:=100;
else
    var_id:=var_id+1;
end if;
return var_id;
exception
    when NO_DATA_FOUND then
        return var_id;
end;
/
```

```
create or replace procedure Transaction_entry(varaccn in Acc_details.Acc_no%type,
varamt in Acc_details.Total_amt%type)
is
vartid Transactions_acc.Transaction_id%type;
begin
vartid:= Max_id();
insert into Transactions_acc values(vartid, varaccn, varamt, 0, 'CHQ', 0, SYSDATE);
dbms_output.put_line('Data inserted with Id ' ||vartid);
end;
/
```

```
set serveroutput on
declare
    cursor add_interest
    is
    select Acc_no, Total_amt from Acc_details where Acc_status='A';
    varaccn Acc_details.Acc_no%type;
    varamt Acc_details.Total_amt%type;
begin
open add_interest;
```

```

if add_interest%isopen then
    loop
        fetch add_interest into varaccn, varamt;
        exit when add_interest%notfound;
        update Acc_details set Total_amt=varamt*1.02 where Acc_no=varaccn;
        dbms_output.put_line(varaccn || ' is updated ');
        varamt:=varamt*1.02;
        Transaction_entry(varaccn, varamt);
    end loop;
else
    dbms_output.put_line('Cursor not opened. ');
end if;
close add_interest;
commit;
end;
/

```

Output:

```

SQL> @D:\sidd57\ass_10_1_b.txt;

Function created.

Procedure created.

SQL> @D:\sidd57\ass_10_1_c.txt;
001 is updated
Data inserted with Id 4
002 is updated
Data inserted with Id 5
003 is updated
Data inserted with Id 6

PL/SQL procedure successfully completed.

```

```

SQL> select * from Acc_details;

```

| ACC_NO | NAME | ADDRESS |
|-----------|--------------|---------------------|
| 001 | AMIT | CK-256 |
| 12-JAN-12 | M 9836793258 | 13-JUN-12 11444.4 A |
| 002 | SUMIT | AB-125 |
| 10-FEB-12 | M 9830073258 | 13-JAN-12 1040.4 A |
| 003 | RAMIT | BG-350 |
| 25-JAN-13 | M 9877363258 | 15-JUL-12 10404 A |

Problem Statement:

2. a) Create the following table: (Table Name:– Emp_audit)

| Column_Name | Data type | Size | Attributes |
|-------------|-----------|------|-----------------------------------|
| Emp_no | Number | 4 | Primary Key |
| Dept_no | Number | 4 | Not Null, Ref. department.dept_no |
| Status | Varchar 2 | 8 | |
| Salary | Number | 8,2 | Not Null |
| Audit_date | Date | | Not Null |

Source Code:

```
set serveroutput on
create table Emp_audit
(Emp_no number(4) primary key,
Dept_no number(4) not null references Dept,
Status varchar2(8),
Salary number(8,2) not null,
Audit_date date not null);
```

Output:

```
SQL> @D:\sidd57\ass_10_2_a.txt;
```

```
Table created.
```

```
SQL> select * from Emp_audit;
```

```
no rows selected
```

```
SQL> desc Emp_audit;
```

| Name | Null? | Type |
|------------|----------|-------------|
| EMP_NO | NOT NULL | NUMBER(4) |
| DEPT_NO | NOT NULL | NUMBER(4) |
| STATUS | | VARCHAR2(8) |
| SALARY | NOT NULL | NUMBER(8,2) |
| AUDIT_DATE | NOT NULL | DATE |

Problem Statement:

- 2.b) Write a trigger that must keep track of records (in above table) that are being deleted or updated from Employee table.

Source Code:

```
set serveroutput on
drop trigger trg_sal;
```

```
create trigger trg_sal after  
update or delete on Emp for each row  
declare  
    status varchar2(20);
```

```

begin
    if updating then
        status:='UPDATE';
    end if;
    if deleting then
        status:='DELETE';
    end if;
    insert into Emp_audit values(:Old.Empno, :Old.Deptno, status, :Old.Sal,
SYSDATE);
end;
/

```

Output:

```

SQL> @D:\sidd57\ass_10_2_b.txt;
drop trigger trg_sal
*
ERROR at line 1:
ORA-04080: trigger 'TRG_SAL' does not exist

Trigger created.
SQL> commit;
Commit complete.

```

Problem Statement:

2.c) Write a SQL command to update the employee entry and describe the output.

Source Code:

```
update Emp set Sal=2050 where Empno=7499;
```

Output:

```

SQL> update Emp set Sal=2050 where Empno=7499;

1 row updated.

SQL> select * from emp;

```

```
SQL> select * from emp;
```

| EMPNO | ENAME | JOB | MGR | HIREDATE | SAL | COMM |
|-------|-------|-----------|------|-----------|---------|------|
| 7839 | KING | PRESIDENT | | 17-NOV-81 | 5000 | |
| 7698 | BLAKE | MANAGER | 7839 | 01-MAY-81 | 2850 | |
| 7782 | CLARK | MANAGER | 7839 | 09-JUN-81 | 2450 | |
| 7566 | JONES | MANAGER | 7839 | 02-APR-81 | 3220.23 | |
| 7788 | SCOTT | ANALYST | 7566 | 19-APR-87 | 3247.29 | |
| 7902 | FORD | ANALYST | 7566 | 03-DEC-81 | 3247.29 | |

| | | | | | | |
|------|--------|----------|------|-----------|--------|------|
| 7369 | SMITH | CLERK | 7902 | 17-DEC-80 | 865.95 | |
| 7499 | ALLEN | SALESMAN | 7698 | 20-FEB-81 | 2050 | 300 |
| 7521 | WARD | SALESMAN | 7698 | 22-FEB-81 | 1250 | 500 |
| 7654 | MARTIN | SALESMAN | 7698 | 28-SEP-81 | 1250 | 1400 |
| 7844 | TURNER | SALESMAN | 7698 | 08-SEP-81 | 1500 | 0 |
| 7900 | JAMES | CLERK | 7698 | 03-DEC-81 | 950 | |
| 7934 | MILLER | CLERK | 7782 | 23-JAN-82 | 1300 | |

```
3 rows selected.
```

```
10
```

```
13 rows selected.
```

```
SQL> select * from Emp_audit;
```

| EMP_NO | DEPT_NO | STATUS | SALARY | AUDIT_DAT |
|--------|---------|--------|--------|-----------|
| 7499 | 30 | UPDATE | 1600 | 08-MAY-24 |

```
SQL> commit;
```

```
Commit complete.
```

```
SQL> |
```


