

PL/SQL

15.

- a. **Write an SQL code block** these raise a user defined exception where business rule is violated. BR for client_master table specifies when the value of bal_due field is less than 0 handle the exception.

```
SQL> create table client_master(
```

```
    id number(2) not null primary key,
```

```
    bal_due number(10,2)
```

```
);
```

```
SQL> insert into client_master (id,bal_due) values (1,500);
```

```
SQL> insert into client_master (id,bal_due) values (2,700);
```

```
SQL> insert into client_master (id,bal_due) values (3,-300);
```

```
SQL> insert into client_master (id,bal_due) values (4,-400);
```

```
SQL> insert into client_master (id,bal_due) values (5,800);
```

```
SQL> select * from client_master;
```

```
SQL> edit
```

Wrote file afiedt.buf

```
1 declare
```

```
2   c_id client_master.id%type := &c_id;
```

```
3   c_baldue client_master.bal_due%type;
```

```
4   balance_exception exception;
```

```
5 begin
```

```
6   select bal_due into c_baldue from client_master where id = c_id;
```

```
7   if c_baldue<0 then
```

```
8       raise balance_exception;
```

```
9   else
```

```
10      dbms_output.put_line('Your balance due is: '||c_baldue);
```

```
11  end if;
```

```
12  exception
```

```
13      when balance_exception then
14      dbms_output.put_line('Your balance due is in negative: '||c_baldue);
15* end;
```

SQL> /

Enter value for c_id: 2

```
old 2:      c_id client_master.id%type := &c_id;
new 2:      c_id client_master.id%type := 2;
```

Your balance due is: 700

SQL> /

Enter value for c_id: 3

```
old 2:      c_id client_master.id%type := &c_id;
new 2:      c_id client_master.id%type := 3;
```

Your balance due is in negative: -300

PL/SQL procedure successfully completed.

b. Write an SQL code block

Borrow(Roll_no, Name, DateofIssue, NameofBook, Status)

Fine(Roll_no,Date,Amt)

Accept roll_no & name of book from user. Check the number of days (from date of issue), if days are between 15 to 30 then fine amount will be Rs 5per day. If no. of days>30, per day fine will be Rs 50 per day & for days less than 30, Rs. 5 per day. After submitting the book, status will change from I to R. If condition of fine is true, then details will be stored into fine table. Also handles the exception by named exception handler or user define exception handler.