1. Suppose XYZ company has a rule stating that a employee’s salary cannot be changed by more than 20% of the original salary if his/her experience is less than 5 years. Create a trigger ‘salary\_change\_monitoring’ to enforce this constraint. The trigger fires whenever there is an update to the emp table and outputs a suitable error message when the rule is violated.
2. Write database triggers that checks that qty\_on\_hnd does not become negative.
3. A trigger occurs when ever an insert or update occurs in bookself table and insert the old and new data in the bookself\_audit table.

create table product\_master

(

pno varchar2(5),

dsc varchar2(10),

profit\_percent number(3),

unit\_measure varchar2(10),

qoh number(4),

reorderlevel number(8),

sell\_price number(8),

cose\_price number(8)

);

create table bookself

(

Title varchar2(6),

publisher varchar2(6),

rating varchar2(5)

);

create table bookself\_audit

(

Title varchar2(6),

publisher varchar2(6),

old\_rating varchar2(5),

new\_rating varchar2(5),

audit\_dt date

)

1. Create 2 tables, LAB7\_RESERVATIONS table with 2 columns

Create table LAB7\_RESERVATIONS

( flight\_id char(6) not null,

Customer\_phone char(11) not null )

Create table LAB7\_flights

( flight\_id char(6) not null,

Seats number(3) not null,

Primary key (flight\_id) )

Insert into LAB7\_flights values (ACO529,120)

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Create a trigger LAB7\_RES\_TRG that will ensure that when a new row is inserted into the

LAB7\_RESERVATIONS table, the flight id is in the LAB7\_FLIGHTS table and that the number

of seats on this flight, SEATS is greater than 0. Here are the details of how the trigger should

behave:

* If flight id is not in the flights table it should raise application error ‘Invalid flight id’
* If flight id is in the flights table, (for example AC0529) but SEATS = 0, then it should raise application error ‘Flight AC0529 has no seats left’
* If flight id is in the flights table and SEATS > 0,then it should update the appropriate row in flights table by setting SEATS = SEATS – 1 for this flight.

**Solution**

1.

CREATE OR REPLACE PACKAGE BODY salary\_change\_monitoring

AS

PROCEDURE emp\_sal\_update (eno emp.empno%type)

is

esal emp.sal%type;

BEGIN

select sal into esal from emp WHERE empno=eno;

esal:= esal+esal\*0.20;

UPDATE emp set sal=esal WHERE empno=eno;

end emp\_sal\_update;

procedure emp.delete(eno emp empno%type);

end emp\_delete;

end emp\_dml;

2.

create or replace trigger product\_master\_trigger

before update or insert of qoh on product\_master

for each row

BEGIN

if :new.qoh < 0 then

raise\_application\_error(-20201,'It is a negative value cannot insert');

END IF;

end;

insert into product\_master(pno,dsc,profit\_percent,unit\_measure,qoh,reorderlevel,sell\_price,cose\_price) values('123','rty',32,34,-1,78,800,300);

3.

create trigger book\_self\_trigger

before insert or update on bookself

begin

if to\_char(sysdate,'DY') in ('THURSADAY','SATURDAY')

or to\_char(sysdate,'HH24') between '08' and '17' then

raise\_application\_error(-20201,'it is not time for insering or updating');

end if;

end;

insert into bookself values('aact','tuhin','8.5');

4.

CREATE TRIGGER LAB\_7\_RES\_TRG

BEFORE INSERT ON LAB7\_RESERVATIONS

FOR EACH ROW

BEGIN

DECLARE FLIGHT\_COUNT INT;

DECLARE SEAT\_COUNT INT;

SELECT COUNT(\*)INTO FLIGHT\_COUNT FROM LAB7\_FLIGHTS WHERE FLIGHT\_ID = NEW.FLIGHT\_ID;

IF FLIGHT\_COUNT =0 THEN

SIGNAL SQLSTATE '20000' SET MESSAGE\_TEXT ='INVALID FLIGHT ID';

--application error 'invalid flight id'

ELSE

SELECT SEATS INTO SEAT\_COUNT FREOM LAB&\_FLUGHTS WHERE FLIGHT\_ID = NEW.FLIGHT\_ID;

IF seat\_count=0 THEN

--FLIGHT AC0529 HAS NO SEATS LEFT

SET@MESSAGE\_TEXT =CONCATE('Flight', newFLIGHT\_ID);

SET@MESSAGE\_TEXT=CONCATE(@MESSAGE\_TEXT,'has no seats left');

signal sqlstate '20000' set MESSAGE\_TEXT=@MESSAGE\_TEXT;

ELSE

UPDATE LAB&\_FLIGHTS SET SEATS =SEATS -1 WHERE FLISGHT\_ID = NEW.FLISGHT\_ID;

END IF;

END IF;

END;

insert into LAB7\_RESERVATIONS values('ACO529',01234567891) ;