

Practical Salary Limit Trigger

--Let's set up staging area first
-- create the salary guide table
-- and a copy of scott's emp table so that we can carry out data manipulation

```
drop table tmpsalguide cascade constraints;  
drop table tmpemp cascade constraints;  
create table tmpemp as select * from scott.emp;
```

```
create table tmpsalguide  
( job varchar2(9) primary key,  
  minsal number(7,2) not null,  
  maxsal number(7,2) );
```

```
insert into tmpsalguide values ('CLERK', 5000, 15000);  
insert into tmpsalguide values ('ANALYST', 10000, 20000);  
insert into tmpsalguide values ('MANAGER', 20000, 40000);  
insert into tmpsalguide values ('SALESMAN', 5000, 30000);  
insert into tmpsalguide values ('PRESIDENT', 50000, " ");
```

--Now, let's create a trigger
-- Try this out for yourself. Make sure you understand what is happening.
--for this trigger we need a tmpsalguide table
--principle is that salaries for particular jobs should be within the limits
-- defined by the salguide table
--NOTE THAT IN CREATING THE TRIGGER THIS DOES NOT CHECK THAT
--CURRENT DATA SATISFIES
-- THESE RULES - UNLIKE DECLARATIVE CONSTRAINTS

```
create or replace trigger tmp_salary_check  
before  
insert or update of sal, job  
on tmpemp  
for each row  
when (new.job <> 'PRESIDENT')  
DECLARE  
  minsal number;  
  maxsal number;  
begin  
  --get the min and max salaries for the  
  --employees job from the TMPALSAGUIDE table  
  select minsal, maxsal  
  into minsal, maxsal  
  from tmpsalguide  
  where job = :new.job;  
  -- if the employees salary is below the min or above  
  -- the max, then generate an error  
  if (:new.sal < minsal or :new.sal > maxsal)  
  then raise_application_error(-20601,
```

```
'Salary ' || :new.sal || ' out of range for job ' || :new.job ||  
' for employee ' || :new.ename);  
end if;  
end;  
/  
-- this ends the plsql block  
/  
-- to test the saltrig trigger  
-- note that the trigger is based on an insert, and update of sal or job  
-- so we really need to test all possible permutations, including nulls
```

Testing – trigger should run when salary out of range.

```
INSERT INTO tmpemp VALUES(2000,'Joe','CLERK','7369',sysdate, '1000','100','10');  
INSERT INTO tmpemp VALUES(2000,'Joe','CLERK','7369',sysdate, '10000','100','10');  
INSERT INTO tmpemp VALUES(2000,'Joe','CLERK','7369',sysdate, '99500','100','10');
```