COMP23111

Exercise number: EX05

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```
SQL> -- sends everything to <EX05-10406141.log>
SQL> set lin 120
SQL> col title for A20
SQL> col createdBy for A20
SQL> col is_distributed_as for A20
SQL> col albumTitle for A20
SQL> col songTitle for A20
SQL>
SQL> -- [body]
SQL>
SQL> --(1)
SQL> select * from contractinfo;

HASCONTRACT                              DATE_FROM DATE_TO    DURATION
---------------------------------------- --------- --------- ----------
Goldfrat                                 10-OCT-10 09-OCT-14          0
Simon Palm                               20-AUG-05 19-AUG-07          0
Simon Palm                               20-SEP-12 19-AUG-14          0
Flut                                     10-AUG-09 09-SEP-14          0
John Cliff                               10-MAR-06 10-APR-12          0
Jay Blancard                             01-JAN-04 20-JUN-14          0
Palmer John                              12-FEB-06 01-JUN-08          0
Zero7                                    31-DEC-11 26-FEB-16          0
JZ                                       24-MAR-05 30-DEC-07          0
Scandal                                  22-OCT-12 19-NOV-16          0
JK Rowl                                  19-APR-03 06-JAN-09          0

HASCONTRACT                              DATE_FROM DATE_TO    DURATION
---------------------------------------- --------- --------- ----------
PJ Blox                                  21-JUN-08 16-JUL-13          0

12 rows selected.

SQL> create or replace trigger setDuration
  2  before insert or update on contractinfo
  3  for each row
  4  begin
  5     :new.duration := :new.date_to - :new.date_from;
  6  end;
  7  /

Trigger created.

SQL> insert into contractinfo(hascontract, date_from, date_to, duration)
  2  values('JZ', '21-JUN-13', '16-JUL-14', null);

1 row created.

SQL> select * from contractinfo;
HASCONTRACT                              DATE_FROM DATE_TO    DURATION
---------------------------------------- --------- --------- ----------
Goldfrat                                 10-OCT-10 09-OCT-14          0
Simon Palm                               20-AUG-05 19-AUG-07          0
Simon Palm                               20-SEP-12 19-AUG-14          0
Flut                                     10-AUG-09 09-SEP-14          0
John Cliff                               10-MAR-06 10-APR-12          0
Jay Blancard                             01-JAN-04 20-JUN-14          0
Palmer John                              12-FEB-06 01-JUN-08          0
Zero7                                    31-DEC-11 26-FEB-16          0
JZ                                       24-MAR-05 30-DEC-07          0
Scandal                                  22-OCT-12 19-NOV-16          0
JK Rowl                                  19-APR-03 06-JAN-09          0
```

```
HASCONTRACT                           DATE_FROM DATE_TO    DURATION
------------------------------------- --------- --------- ----------
PJ Blox                               21-JUN-08 16-JUL-13          0
JZ                                    21-JUN-13 16-JUL-14        390

13 rows selected.

SQL> update contractinfo
  2  set date_to = '16-JUL-15'
  3  where date_from = '21-JUN-13';

1 row updated.

SQL> select * from contractinfo;

HASCONTRACT                           DATE_FROM DATE_TO    DURATION
------------------------------------- --------- --------- ----------
Goldfrat                              10-OCT-10 09-OCT-14          0
Simon Palm                            20-AUG-05 19-AUG-07          0
Simon Palm                            20-SEP-12 19-AUG-14          0
Flut                                  10-AUG-09 09-SEP-14          0
John Cliff                            10-MAR-06 10-APR-12          0
Jay Blancard                          01-JAN-04 20-JUN-14          0
Palmer John                          12-FEB-06 01-JUN-08          0
Zero7                                 31-DEC-11 26-FEB-16          0
JZ                                    24-MAR-05 30-DEC-07          0
Scandal                               22-OCT-12 19-NOV-16          0
JK Rowl                               19-APR-03 06-JAN-09          0

HASCONTRACT                           DATE_FROM DATE_TO    DURATION
------------------------------------- --------- --------- ----------
PJ Blox                               21-JUN-08 16-JUL-13          0
JZ                                    21-JUN-13 16-JUL-15        755

13 rows selected.

SQL>
SQL> --(2)
SQL> create or replace procedure checkTemporal
  2  (name in contractinfo.hascontract%type, dateFrom in date, dateTo in date)
  3  is
  4     cnt number;
  5  begin
  6     if dateFrom > dateTo then
  7        raise_application_error(-20001, 'date_from should be earlier than
date_to');
  8     end if;
  9     select count(hascontract) into cnt from
 10        (select * from contractinfo where hascontract = name
 11        and ((dateFrom between date_from and date_to)
 12      or (dateTo between date_from and date_to)));
 13        if cnt > 0 then
 14           raise_application_error(-20002, 'conflict with prior
contracts');
 15        end if;
 16  end;
 17  /

Procedure created.

SQL> -- dateTo prior to dateFrom
SQL> execute checkTemporal('JZ', '11-OCT-16', '20-OCT-14');
BEGIN checkTemporal('JZ', '11-OCT-16', '20-OCT-14'); END;
```

```
                *
ERROR at line 1:
ORA-20001: date_from should be earlier than date_to
ORA-06512: at "P87934WL.CHECKTEMPORAL", line 7
ORA-06512: at line 1


SQL> -- new contract's valid date lies between old one's valid date
SQL> execute checkTemporal('JZ', '1-JAN-05', '13-OCT-06');
BEGIN checkTemporal('JZ', '1-JAN-05', '13-OCT-06'); END;

                *
ERROR at line 1:
ORA-20002: conflict with prior contracts
ORA-06512: at "P87934WL.CHECKTEMPORAL", line 14
ORA-06512: at line 1


SQL> -- working just fine
SQL> execute checkTemporal('JZ', '13-OCT-18', '10-OCT-20');

PL/SQL procedure successfully completed.

SQL>
SQL> --(3)
SQL> create or replace view AlbumDistribution
  2  (
  3     album,
  4     title,
  5     createdby,
  6     is_distributed_as
  7  )
  8  as(
  9     select album_id, title, createdBy,
 10         case
 11         when album_id like'%t' then 't'
 12         when album_id like '%c' then 'c'
 13         when album_id like '%v' then 'v'
 14         end
 15     from (select * from album)
 16  );

View created.

SQL> select * from AlbumDistribution;

ALBUM TITLE                CREATEDBY            IS_DISTRIBUTED_AS
----- -------------------- -------------------- --------------------
1c    20 People in a Field Goldfrat             c
1v    20 People in a Field Goldfrat             v
1t    20 People in a Field Goldfrat             t
2c    My Feet              Flut                 c
2v    My Feet              Flut                 v
3c    Debut               Jay Blancard          c

6 rows selected.

SQL>
SQL> --(4)
SQL> set serveroutput on;
SQL> create or replace procedure printSequence
  2  (albumType in varchar, albumTitle in album.title%type)
  3  is
  4  albumName album.title%type;
```

```
  5  fetchedAlbumTitle album.title%type;
  6  fetchedSongTitle finishedtrack.released_title%type;
  7  fetchedSequence number;
  8  cursor cursor1(albumName in album.title%type) is
  9          select distinct album.title as albumTitle,
 10        finishedtrack.released_title as songTitle,
 11        hastrack.sequence as sNum
 12          from hastrack
 13          join finishedtrack on hastrack.originatesfrom =
finishedtrack.originatesFrom
 14          join album on hastrack.album_id = album.album_id
 15          where album.title = albumName
 16      order by(hastrack.sequence);
 17
 18  begin
 19  -- Get the title of the album
 20          select title into albumName from AlbumDistribution
 21          where is_distributed_as = albumType and title like '%'||
albumTitle||'%';
 22          open cursor1(albumName);
 23          loop
 24          fetch cursor1 into fetchedAlbumTitle, fetchedSongTitle,
fetchedSequence;
 25          exit when cursor1%NOTFOUND;
 26          dbms_output.put_line(fetchedSequence || ', ' || fetchedSongTitle ||
' > ' || fetchedAlbumTitle);
 27          end loop;
 28          close cursor1;
 29  end;
 30  /

Procedure created.

SQL>
SQL> -- valid
SQL> select distinct album.title as albumTitle, finishedtrack.released_title as
songTitle
  2  from hastrack
  3  join finishedtrack on hastrack.originatesfrom =
finishedtrack.originatesFrom
  4  join album on hastrack.album_id = album.album_id
  5  where album.title = 'My Feet';

ALBUMTITLE           SONGTITLE
-------------------- --------------------
My Feet              Wow
My Feet              Whizzy
My Feet              Milko
My Feet              Place and Time
My Feet              Mad
My Feet              Who Are You?
My Feet              Bling

7 rows selected.

SQL> execute printSequence('c', 'ee');
1, Wow > My Feet
2, Whizzy > My Feet
3, Who Are You? > My Feet
4, Place and Time > My Feet
5, Milko > My Feet
6, Mad > My Feet
7, Bling > My Feet
```

```
PL/SQL procedure successfully completed.

SQL>
SQL> --invalid
SQL> execute printSequence('c', 'invalidTest');
BEGIN printSequence('c', 'invalidTest'); END;

*
ERROR at line 1:
ORA-01403: no data found
ORA-06512: at "P87934WL.PRINTSEQUENCE", line 20
ORA-06512: at line 1


SQL>
SQL> -- [close]
SQL> SPOOL OFF
```