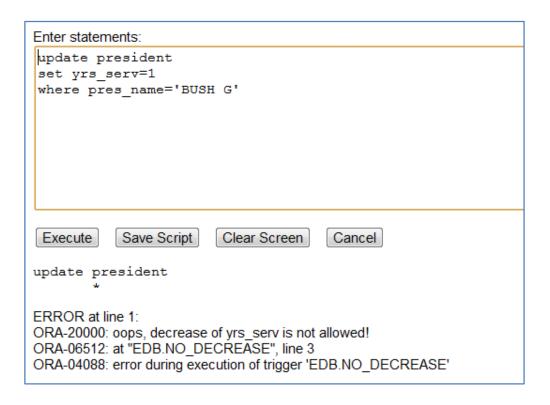# SET 5 – Triggers

Exercises / assignments

For all exercises:
Write an sql statement to test your trigger.

1. Implement the constraint:
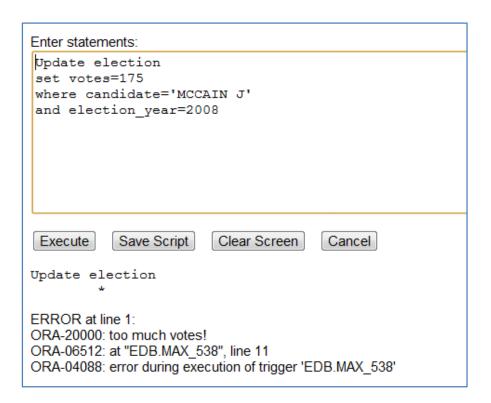   *The number of presidency years of a president can never be decreased.*

```
Enter statements:
update president
set yrs_serv=1
where pres_name='BUSH G'




[ Execute ]  [ Save Script ]  [ Clear Screen ]  [ Cancel ]

update president
         *

ERROR at line 1:
ORA-20000: oops, decrease of yrs_serv is not allowed!
ORA-06512: at "EDB.NO_DECREASE", line 3
ORA-04088: error during execution of trigger 'EDB.NO_DECREASE'
```

2. The following rule applies the presidential elections:

   The total number of votes, per election year, of the elections after 1960, does not exceed 538.
   Write a trigger to implement this constraint.

   ```
   Enter statements:
   Update election
   set votes=175
   where candidate='MCCAIN J'
   and election_year=2008


   [ Execute ]  [ Save Script ]  [ Clear Screen ]  [ Cancel ]

   Update election
              *

   ERROR at line 1:
   ORA-20000: too much votes!
   ORA-06512: at "EDB.MAX_538", line 11
   ORA-04088: error during execution of trigger 'EDB.MAX_538'
   ```

3. The president is a busy man! That's the reason a president can not have more than 5 hobbies. Make sure a president can't have more than 5 hobbies in the president database.

4. Just to be sure implement the constraint: The inauguration year of a president must always occur at least 21 years after the date of birth of a president.

5. **[optional exercise]**
   And of course: An election cannot yield more than one winner. Make sure this is prohibited in our database!