Laboratory 2
Accessing Oracle 12c database servers and using SQL*Plus

This laboratory consists of 4 tasks.

Task 1 Implementing a simple SQL script

Start SQL*Plus client on XP system and connect to one of Oracle 11g database servers running on XP system. Implement a script that contains SQL and SQL*Plus statements given below. Note, that the script below is NOT syntactically correct and the system reports syntax errors when the script is executed. Remove the errors and save a corrected script in a file `task1.sql`.

```
SET ECHO ON
SET HEADING OFF
SET FEEDBACK OFF
CREATE TABLE CAR(
    REGO  CHAR(8)         NOT NULL,
    MAKE  VARCHAR(20)     NOT NULL,
    CONSTRAINT CAR_PKEY PRIMARY KEY(REGO) );
INSERT INTO CAR VALUES('PKR856UK, 'TOYOTA');
INSERT INTO CAR VALUES('AL0877UK, 'TOYOTA');
COMMIT;
SELECT REGO, MAKE TO_CHAR(SYSDATE, 'DD/MM/YY') NOW
FROM CAR;
DROP TABLE CAR PURGE
```

Task 2 Saving a report from the execution of SQL script in a file

Start SQL*Plus client on XP system and connect to Oracle database server `csci` running on Sun OS system. Implement a script `task2.sql` listed below. Do not re-type the statements ! Use copy and paste.

```
SET ECHO ON
SET HEADING OFF
SET FEEDBACK OFF
CREATE TABLE MESSAGES( MNUMBER NUMBER(2),
                       MTEXT VARCHAR(11) );
INSERT INTO MESSAGES VALUES( 0, 'like ' );
INSERT INTO MESSAGES VALUES( 1, 'don''t like ' );
COMMIT;
SELECT 'I ', MTEXT, ' you ', user, ' !'
FROM MESSAGES, DUAL
WHERE MNUMBER = MOD(TO_NUMBER(TO_CHAR(SYSDATE, 'SS')),2);
DROP TABLE MESSAGES PURGE;
```

Execute a script `task2.sql` and save a report from one of the executions in a text file `task2.lst`. Next, transfer a file `task2.lst` from Sun OS (Unix) to your XP system. You can use `ssh` client to transfer the file. The file will be submitted at the end of laboratory class.

Task 3 Implementing a parameterised SQL script

Start SQL*Plus client on Sun OS system and connect to one of Oracle database server running on XP system. Implement a script `task3.sql` given below. Do not re-type the statements ! Use copy and paste.

```
SET ECHO ON
SET HEADING OFF
SET FEEDBACK ON
ACCEPT A NUMBER PROMPT 'ENTER THE FIRST NUMBER>'
ACCEPT B NUMBER PROMPT 'ENTER THE SECOND NUMBER>'
SELECT '&A + &B =', &A + &B
FROM DUAL;
```

Execute a script `task3.sql`. Change the script such that it performs the summation of `3` numbers. Execute the script after the modifications and save a report in a text file `task3.lst`. A file `task3.lst` will be submitted at the end of laboratory class.

Task 4 Setting the parameters of SQL*Plus

Start SQL*Plus client and connect to one of Oracle database servers. Implement a script `task4.sql` that contains the statements given below. Do not re-type the statements ! Use copy and paste.

```
CREATE TABLE MESSAGES( MTEXT VARCHAR(80) );
INSERT INTO MESSAGES VALUES(
'Start SQL*Plus client on XP system');
COMMIT;
SELECT MTEXT
FROM MESSAGES;
SELECT MTEXT || MTEXT
FROM MESSAGES;
SELECT MTEXT || MTEXT || MTEXT
FROM MESSAGES;
```

Modify a script `task4.sql` such that SQL statements are displayed during execution of the script, a header `TASK 4` is displayed every 2 lines, lines are no longer than 20 characters and when a text to be displayed is longer than 20 characters then it must be wrapped to the next line. Save the results of execution in a text file `task4.lst`. A file `task4.lst` will be submitted at the end of laboratory class.

Submission

Zip the files `task1.sql`, `task2.lst`, `task3.lst`, and `task4.lst` obtained as the solutions of tasks 1, 2, 3, and 4 into a file `solutions2.zip` and submit the file through Moodle. A submission procedure is the following.

(1) Connect to Moodle.
(2) Navigate to a folder `SUBMISSIONS`
(3) Click at `LABORATORY 2, Submit your solutions here` link.
(4) Click at `Add Attachments` button.
(5) Navigate to a location where a file `solutions2.zip` has been saved.
(6) Select the file and click at `Open` button.
(7) Click at `Submit` button.
(8) Click at `OK` button to return to `Home Page`.

End of laboratory 2