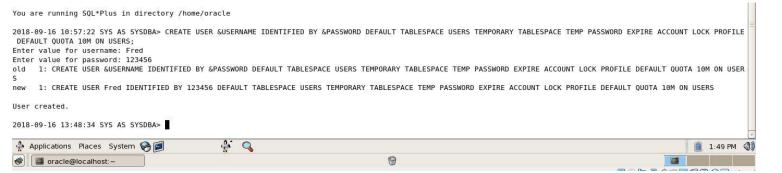## Part 2. Exercise Questions

Question 1.
You were just hired as a new junior Oracle database administrator to assist a team of five senior database administrators. In your first week, you were handed the task of writing a script as a template for creating database users. The script is to prompt the administrator for a username and password, and the script creates the user according to the following guidelines.

> a. The default tablespace is USERS.
> b. The temporary tablespace is TEMP
> c. The account is initially locked.
> d. Expire the password
> e. The user account is assigned the DEFAULT profile.
> f. Set a 10 MB quota on the USERS tablespace.

```
CREATE USER &USERNAME IDENTIFIED BY &PASSWORD
DEFAULT TABLESPACE USERS
TEMPORARY TABLESPACE TEMP
ACCOUNT LOCK
PASSWORD EXPIRE
PROFILE DEFAULT
QUOTA 10M ON USERS ;
```

```
You are running SQL*Plus in directory /home/oracle

2018-09-16 10:57:22 SYS AS SYSDBA> CREATE USER &USERNAME IDENTIFIED BY &PASSWORD DEFAULT TABLESPACE USERS TEMPORARY TABLESPACE TEMP PASSWORD EXPIRE ACCOUNT LOCK PROFILE
 DEFAULT QUOTA 10M ON USERS;
Enter value for username: Fred
Enter value for password: 123456
old   1: CREATE USER &USERNAME IDENTIFIED BY &PASSWORD DEFAULT TABLESPACE USERS TEMPORARY TABLESPACE TEMP PASSWORD EXPIRE ACCOUNT LOCK PROFILE DEFAULT QUOTA 10M ON USER
S
new   1: CREATE USER Fred IDENTIFIED BY 123456 DEFAULT TABLESPACE USERS TEMPORARY TABLESPACE TEMP PASSWORD EXPIRE ACCOUNT LOCK PROFILE DEFAULT QUOTA 10M ON USERS

User created.

2018-09-16 13:48:34 SYS AS SYSDBA>
```

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Question 2.
Run a query on the DBA_TS_QUOTAS data dictionary view that only displays users who have used up no storage.

```
SELECT USERNAME
FROM DBA_TS_QUOTAS
WHERE BYTES = 0
```

```
2018-09-16 21:20:42 SYS AS SYSDBA> SELECT USERNAME FROM DBA_TS_QUOTAS WHERE BYTES = 0;

USERNAME
------------------------------
CH0306
FLOWS_FILES
CH0306
FRED

2018-09-16 21:22:13 SYS AS SYSDBA>
```

Question 3.

Imagine that you have successfully completed CS674. Now you are hired as a database security expert to train the database administration team. At the first training session, you ask the trainees to perform the following tasks using SQL*Plus. Write the query and show the output for the following steps (as sys or system):

   a. Create a user named CH0306 with the same password. Use all default values for the user options.

CREATE USER CH0306 IDENTIFIED BY CH0306

```
2018-09-16 14:09:52 SYS AS SYSDBA> create user ch0306 identified by ch0306 ;

User created.

2018-09-16 14:17:57 SYS AS SYSDBA> SELECT USERNAME, ACCOUNT_STATUS FROM DBA_USERS WHERE USERNAME = 'CH0306' ;

USERNAME                        ACCOUNT_STATUS
------------------------------  ------------------------------
CH0306                          OPEN

2018-09-16 14:19:10 SYS AS SYSDBA>
```


   b. Modify the user options to change the default tablespace to TOOLS. (Note: You need to create a TOOLS tablespace before you answer this question.)

ALTER USER CH0306 DEFAULT TABLESPACE TOOLS

```
2018-09-16 14:37:39 SYS AS SYSDBA> create tablespace TOOLS datafile 'tools.dbf' SIZE 20M;

Tablespace created.

2018-09-16 14:39:37 SYS AS SYSDBA> ALTER USER CH0306 DEFAULT TABLESPACE TOOLS;

User altered.

2018-09-16 14:41:11 SYS AS SYSDBA>
```

   c. Lock the CH0306 account.

ALTER USER CH0306 ACCOUNT LOCK

```
2018-09-16 17:00:23 SYS AS SYSDBA> ALTER USER CH0306 ACCOUNT LOCK;

User altered.

2018-09-16 17:01:04 SYS AS SYSDBA>
```

    d. Change the CH0306 user password to DBSEC.

ALTER USER CH0306 IDENTIFIED BY DBSEC

```
2018-09-16 17:01:04 SYS AS SYSDBA> ALTER USER CH0306 IDENTIFIED BY DBSEC;

User altered.

2018-09-16 17:03:15 SYS AS SYSDBA> █
```

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    e. Query the CH0306 account using the data dictionary view DBA_USERS.

SELECT USERNAME, ACCOUNT_STATUS,
DEFAULT_TABLESPACE, TEMPORARY_TABLESPACE
 FROM DBA USERS WHERE USERNAME = 'CH0306'

```
2018-09-16 17:03:15 SYS AS SYSDBA> SELECT USERNAME, ACCOUNT_STATUS, TEMPORARY_TABLESPACE, DEFAULT_TABLESPACE FROM DBA_USERS WHERE USERNAME = 'CH0306';

USERNAME                       ACCOUNT_STATUS            TEMPORARY_TABLESPACE             DEFAULT_TABLESPACE
------------------------------ ------------------------- -------------------------------- ------------------------------
CH0306                         LOCKED                    TEMP                             TOOLS

2018-09-16 17:11:19 SYS AS SYSDBA> █
```

    f. Query the CH0306 user's quotas using the data dictionary view DBA_TS_QUOTAS.

SELECT USERNAME, TABLESPACE_NAME, MAX_BYTES, BYTES
FROM DBA_TS_QUOTAS
WHERE USERNAME = 'CH0306'

```
2018-09-16 17:11:19 SYS AS SYSDBA> SELECT USERNAME, TABLESPACE_NAME, MAX_BYTES, BYTES FROM DBA_TS_QUOTAS WHERE USERNAME = 'CH0306';

no rows selected

2018-09-16 17:17:17 SYS AS SYSDBA> SELECT * FROM DBA_TS_QUOTAS;

TABLESPACE_NAME                USERNAME                        BYTES  MAX_BYTES      BLOCKS MAX_BLOCKS DRO
------------------------------ ------------------------------ ------ ---------- ---------- ---------- ---
USERS                          PHPDEMO                       3080192        -1        376         -1 NO
USERS                          OE1                           6619136        -1        808         -1 NO
USERS                          HR                            1769472        -1        216         -1 NO
USERS                          HR1                           1638400        -1        200         -1 NO
SYSAUX                         APPQOSSYS                      131072        -1         16         -1 NO
USERS                          TIMESTEN                        65536   5242880          8        640 NO
USERS                          CACHEADM                       458752        -1         56         -1 NO
USERS                          TTHR                          1638400        -1        200         -1 NO
USERS                          PLS                            589824        -1         72         -1 NO
USERS                          FRED                                0  10485760          0       1280 NO
USERS                          OE                           14876672        -1       1816         -1 NO
SYSAUX                         OLAPSYS                       9240576        -1       1128         -1 NO
SYSAUX                         SYSMAN                       89456640        -1      10920         -1 NO
USERS                          APP                            131072  20971520         16       2560 NO
SYSAUX                         FLOWS_FILES                         0        -1          0         -1 NO
APEX_1265209995679366          OBE                           6815744        -1        832         -1 NO

16 rows selected.

2018-09-16 17:20:06 SYS AS SYSDBA> █
```
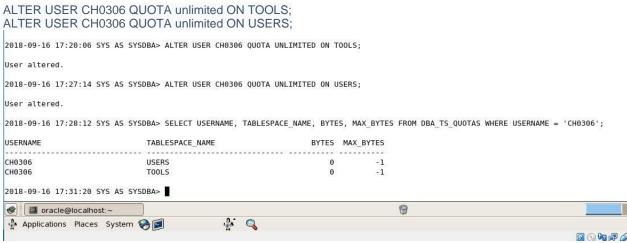
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g. Provide unlimited storage quotas to CH0306 on TOOLS and USERS.

ALTER USER CH0306 QUOTA unlimited ON TOOLS;
ALTER USER CH0306 QUOTA unlimited ON USERS;

```
2018-09-16 17:20:06 SYS AS SYSDBA> ALTER USER CH0306 QUOTA UNLIMITED ON TOOLS;

User altered.

2018-09-16 17:27:14 SYS AS SYSDBA> ALTER USER CH0306 QUOTA UNLIMITED ON USERS;

User altered.

2018-09-16 17:28:12 SYS AS SYSDBA> SELECT USERNAME, TABLESPACE_NAME, BYTES, MAX_BYTES FROM DBA_TS_QUOTAS WHERE USERNAME = 'CH0306';

USERNAME                     TABLESPACE_NAME               BYTES  MAX_BYTES
---------------------------- ----------------------------- ---------- ----------
CH0306                       USERS                             0         -1
CH0306                       TOOLS                             0         -1

2018-09-16 17:31:20 SYS AS SYSDBA> ▮
```

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(Note: A quota value of -1 indicated UNLIMITED storage)