

Course/Code: Advanced Database Administration/CS 540

Instructor: Dr. Vidhyacharan Bhaskar

Signature Assignment

Italian Restaurant Database Management

Student Name: Shoumya Singh

Id: 19566

1. Establishing & Administering Database.

```
[oracle@localhost oracle]$ sqlplus sys/oracle as sysdba
```

```
SQL*Plus: Release 19.0.0.0.0 - Production on Mon Apr 11 15:49:11 2022  
Version 19.3.0.0.0
```

```
Copyright (c) 1982, 2019, Oracle. All rights reserved.
```

```
Connected to:
```

```
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production  
Version 19.3.0.0.0
```

2. Creating Tablespaces

```
SQL> select tablespace_name from dba_tablespaces;
```

```
TABSPACE_NAME
```

```
-----
```

```
SYSTEM
```

```
SYSAUX
```

```
TEMP
```

```
USERS
```

```
APEX_1291597703607401
```

```
UNDOTBS2
```

```
6 rows selected.
```

```
SQL> CREATE TABLESPACE italianREST
  2  DATAFILE 'italianR_data.dbf' SIZE 1M
  3  AUTOEXTEND ON NEXT 1M;
```

Tablespace created.

```
SQL> select tablespace_name from dba_tablespaces;
```

TABLESPACE_NAME

SYSTEM

SYSAUX

TEMP

USERS

APEX_1291597703607401

UNDOTBS2

ITALIANREST

7 rows selected.

3. Creating Table in Tablespace

```
SQL> CREATE TABLE customer (
  2  customerFirstName VARCHAR(30),
  3  customerLastName VARCHAR(30),
  4  phoneNumber INT,
  5  emailAddress VARCHAR(30),
  6  customerID INT,
  7  PRIMARY KEY (customerID)
  8 ) TABLESPACE ITALIANREST;
```

Table created.

```
SQL> INSERT INTO customer VALUES ('Blake','Bates',2878999087,'bbates90@gmail.com',001);
```

1 row created.

4. Creation of a User

CREATE USER

--command to create the user

```
CREATE USER shoumya IDENTIFIED BY shoumya;
```

--command to create the user

```
CREATE USER shoumya IDENTIFIED BY shoumya;
```

Script Output x

Task completed in 0.392 seconds

User SHOUMYA created.

--Grant session to a user

GRANT CREATE SESSION TO shoumya;

--Grant session to user

```
GRANT CREATE SESSION TO shoumya;
```

Script Output x

Task completed in 0.239 seconds

Grant succeeded.

```
SELECT username, default_tablespace, profile, authentication_type  
FROM dba_users  
Where account_status = 'OPEN' and username = 'SHOUMYA'
```

Script Output x

Query Result x

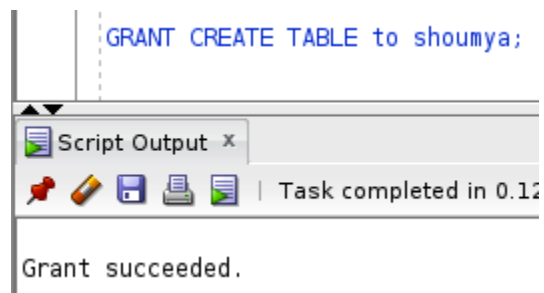
All Rows Fetched: 1 in 0.02 seconds

	USERNAME	DEFAULT_TABLESPACE	PROFILE	AUTHENTICATION_TYPE
1	SHOUMYA	USERS	DEFAULT	PASSWORD

5. User Grant Privileges

```
SQL> create table test(id int PRIMARY KEY, name varchar(20)) ;
create table test(id int PRIMARY KEY, name varchar(20))
*
ERROR at line 1:
ORA-01031: insufficient privileges

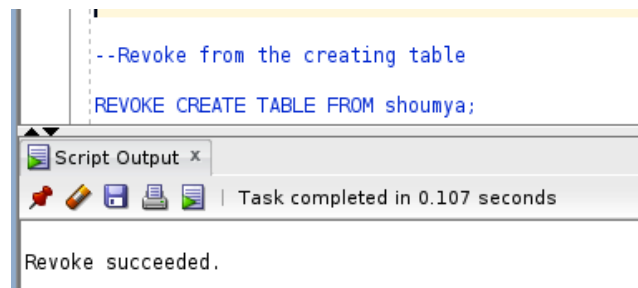
SQL> █
```



```
SQL> create table test(id int PRIMARY KEY, name varchar(20));
Table created.

SQL> █
```

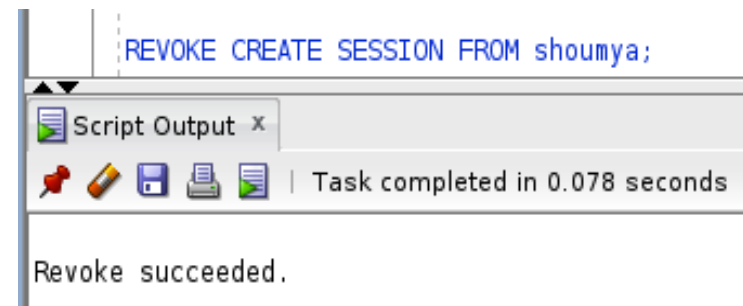
6. User Revoke Privileges



PRIVILEGE

CREATE SESSION

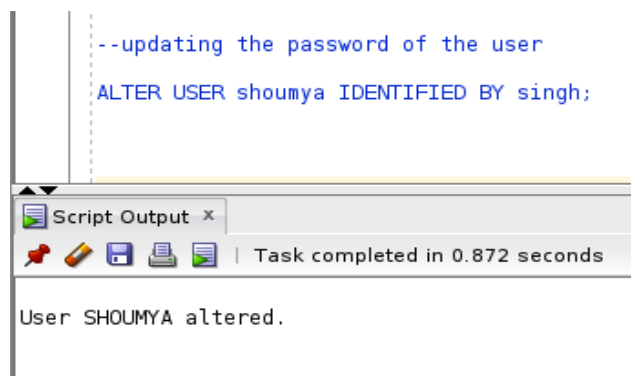
SQL> █



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```
Username? ('') shoumya
Password? (*****?) *****
ERROR:
ORA-01017: invalid username/password; logon denied
Username? (RETRYING) ('shoumya/*****') shoumya
Password? (RETRYING) (*****?) *****
ERROR:
ORA-01045: user SHOUMYA lacks CREATE SESSION privilege; logon denied
Username? (RETRYING) ('shoumya/*****') █
```

7. Alter & Lock a User








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```
Username? ('') shoumya
Password? (*****?) *****
ERROR:
ORA-01017: invalid username/password; logon denied
Username? (RETRYING) ('shoumya/*****') *****
```

```
--Lock the user

ALTER USER shoumya ACCOUNT LOCK;
```

 Script Output x


    | Task completed in 0.298 seconds





User SHOUMYA altered.

```
Username? ('') shoumya
Password? (*****?) *****
ERROR:
ORA-28000: The account is locked.
Username? (RETRYING) ('shoumya/*****') █
```

8. User Profile Creation

```
CREATE PROFILE CRM_USERS LIMIT
    SESSIONS_PER_USER    UNLIMITED
    CPU_PER_SESSION       UNLIMITED
    CPU_PER_CALL          3000
    CONNECT_TIME          15;
```

 Script Output x

    | Task completed in 0.264 seconds

Profile CRM_USERS created.

```
CREATE USER singh IDENTIFIED BY singh12345  
PROFILE CRM_USERS;
```

Script Output x

Task completed in 0.153 seconds

Profile CRM_USERS created.

User SINGH created.

9. Accessing & Dropping the Profile

```
SELECT  
*  
FROM  
dba_profiles  
WHERE  
PROFILE = 'CRM_USERS'  
ORDER BY  
resource_type,  
resource_name;
```

Script Output x

Query Result x

SQL | All Rows Fetched: 17 in 0.061 seconds

	PROFILE	RESOURCE_NAME	RESOURCE_TYPE	LIMIT	COMMON	INHERITED	IMPLICIT
1	CRM_USERS	COMPOSITE_LIMIT	KERNEL	DEFAULT	NO	NO	NO
2	CRM_USERS	CONNECT_TIME	KERNEL	15	NO	NO	NO
3	CRM_USERS	CPU_PER_CALL	KERNEL	3000	NO	NO	NO
4	CRM_USERS	CPU_PER_SESSION	KERNEL	UNLIMITED	NO	NO	NO
5	CRM_USERS	IDLE_TIME	KERNEL	DEFAULT	NO	NO	NO
6	CRM_USERS	LOGICAL_READS_PER_CALL	KERNEL	DEFAULT	NO	NO	NO
7	CRM_USERS	LOGICAL_READS_PER_SESSION	KERNEL	DEFAULT	NO	NO	NO
8	CRM_USERS	PRIVATE_SGA	KERNEL	DEFAULT	NO	NO	NO

```
--dropping the user profile
```

```
DROP PROFILE CRM_USERS CASCADE;
```

Script Output x

Task completed in 0.677 seconds

Profile CRM_USERS dropped.

10. Redo Log

```
--Switching to log file
select * from v$log;
```

GROUP#	THREAD#	SEQUENCE#	BYTES	BLOCKSIZE	MEMBERS	ARCHIVED	STATUS	FIRST_CHANGE#	FIRST_TIME	NEXT_CHANGE#	NEXT_TIME	CON_ID
1	1	1	25 209715200	512	1	NO	INACTIVE	323151413	13-APR-22	334533316	16-APR-22	0
2	2	1	26 209715200	512	1	NO	CURRENT	334533316	16-APR-22	18446744073709551615 (null)		0
3	3	1	24 209715200	512	1	NO	INACTIVE	313044213	13-APR-22	323151413	13-APR-22	0

```
--To multiplex the redo logs, first, we must identify how many groups and members exist.
select group#, member from v$logfile order by group#, member;
```

GROUP#	MEMBER
1	1 /u01/app/oracle/oradata/ORCLCDB/redo01.log
2	2 /u01/app/oracle/oradata/ORCLCDB/redo02.log
3	3 /u01/app/oracle/oradata/ORCLCDB/redo03.log

11. Memory Management

```
SHOW PARAMETER MEMORY_TARGET;
```

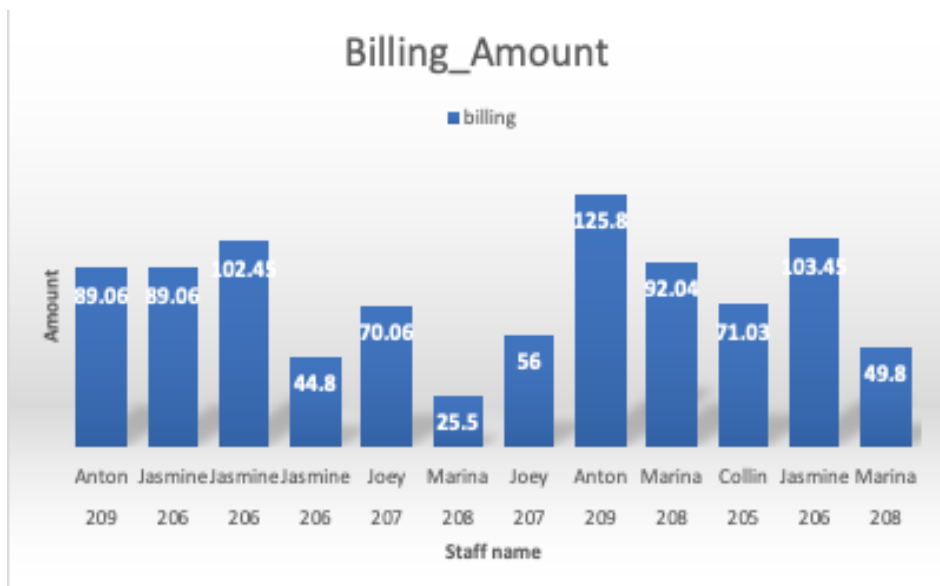
NAME	TYPE	VALUE
memory_target	big integer	0

```
--show cache
SHOW PARAMETER db_cache_size;
```

NAME	TYPE	VALUE
db_cache_size	big integer	0

12. The total amount of billing is based on each staff member.

```
select s.staffid,s.stafffirstname as name, transAmount as billing
FROM billing b
join
orders o
on b.orderid =o.orderid
join staff s
on s.staffid = o.staffid
```



```
select s.staffid,s.stafffirstname as name, transAmount as billing
FROM billing b
join
orders o
on b.orderid =o.orderid
join staff s
on s.staffid = o.staffid
```

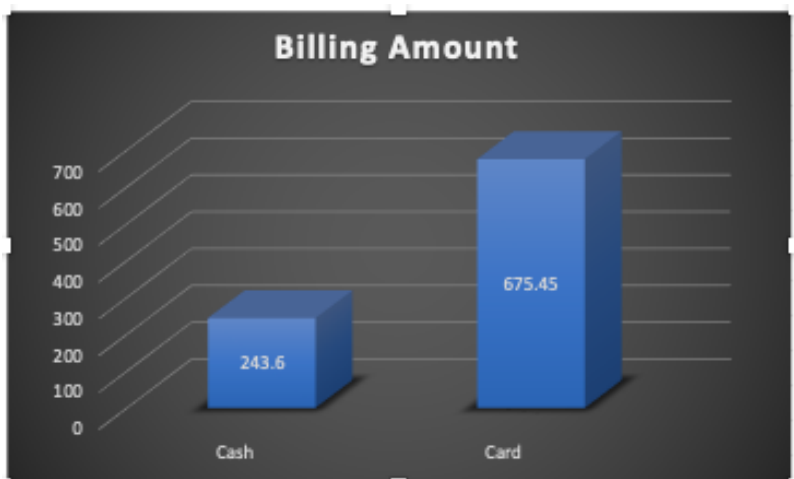
Query Result x

SQL | All Rows Fetched: 12 in 1.377 seconds

	STAFFID	NAME	BILLING
1	209	Anton	89.06
2	206	Jasmine	89.06
3	206	Jasmine	102.45
4	206	Jasmine	44.8
5	207	Joey	70.06
6	208	Marina	25.5
7	207	Joey	56
8	209	Anton	125.8
9	208	Marina	92.04
10	205	Collin	71.03
11	206	Jasmine	103.45
12	208	Marina	49.8

13. The total payment is based on payment type.

```
select paymenttype, sum(transAmount) as billing
FROM billing b
join
orders o
on b.orderid =o.orderid
join staff s
on s.staffid = o.staffid
group by paymenttype
```

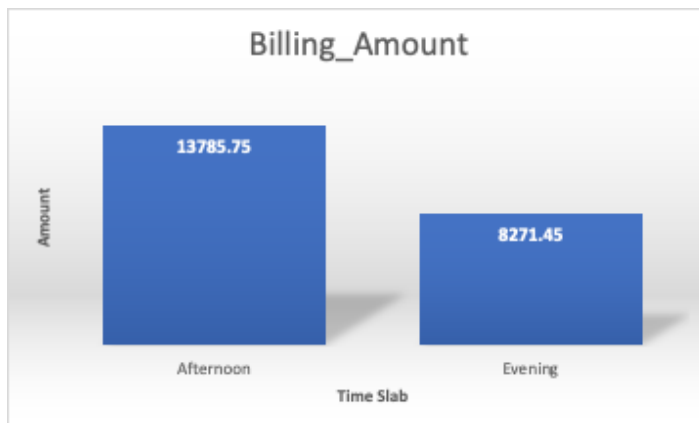


```
select paymenttype, sum(transAmount) as billing
FROM billing b
join
orders o
on b.orderid =o.orderid
join staff s
on s.staffid = o.staffid
group by paymenttype
```

Query Result x	
SQL All Rows Fetched: 2 in 0.215 seconds	
PAYMENTTYPE	BILLING
1 Card	675.45
2 Cash	243.6

14. The payment based on the shifts.

```
select s.shifttimeid, sum(transAmount) as billing
FROM billing b
join
orders o
on b.orderid =o.orderid
join staff s
on s.staffid = o.staffid
join shift s
on s.staffid= s.staffid
group by s.shifttimeid
```



```
select s.shifttimeid, sum(transAmount) as billing
FROM billing b
join
orders o
on b.orderid =o.orderid
join staff s
on s.staffid = o.staffid
join shift s
on s.staffid= s.staffid
group by s.shifttimeid
```

Query Result x

SQL | All Rows Fetched: 2 in 0.054 seconds

SHIFTTIMEID	BILLING
1 Afternoon	13785.75
2 Evening	8271.45

