COURSE: ITMS 528

SEMESTER: FALL 2016

PROFESSOR: KATHERINE PAPADEMAS

TA: BALAJI SELVA RAJAN

STUDENT NAME: KESHAV NARASAPURA RAJAGOPALAIAH

CWID: A20376662

OBJECTIVE:

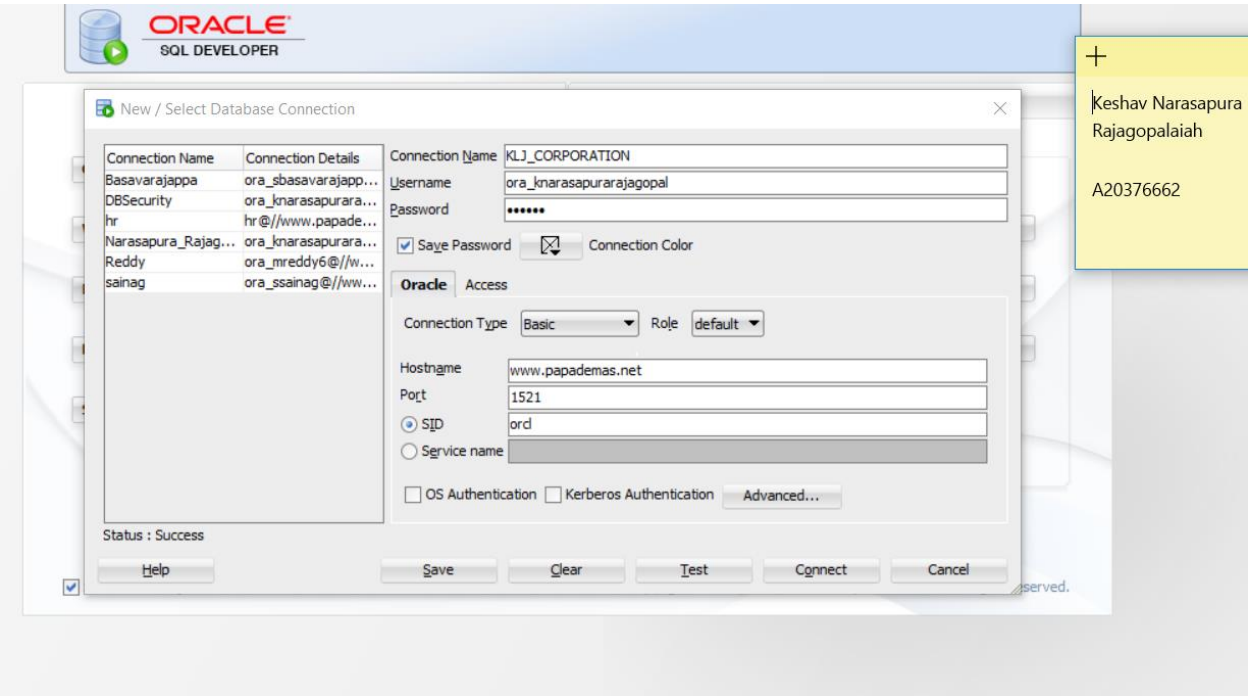
KLJ is a multi-million-dollar software development corporation, specializing in web and business application development, robotics, and health instrumentation design. They are located at 3300 So. Federal St., Chicago, IL 60616.

we are making and setting up association with the organization to different databases alongside giving uncommon benefits to IT Manager and SYSDBA. Implementing Network Policy to the corporation and helping in setting up Database with minimum security risks.

TASK1: A SQL Login and password to establish connection to SQL Developer and MYSQL.

ORCALE SQL DEVELOPER

Establishing Connection to the Database.



The credentials and connection details to log in to Oracle database is:

Connection_Name: KLJ_CORPORATION

Username: ora_knarasapurarajagopal

Password: oracle

Hostname: www.papademas.net

Port: 1521

SID: orcl

In the KLJ_CORPORATION database, employee table is created to store the employee details.

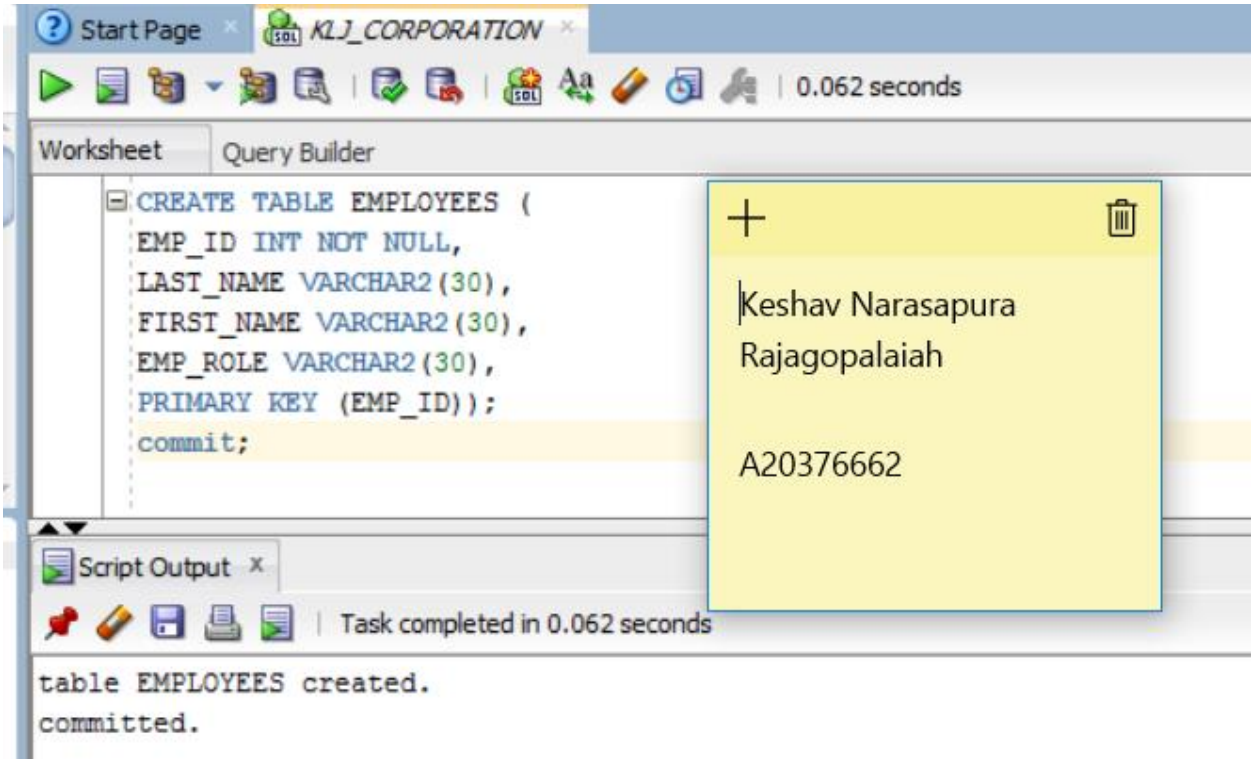
DDL statements in creating Table and Loading Data to Table are as follows:

CREATE TABLE EMPLOYEES (

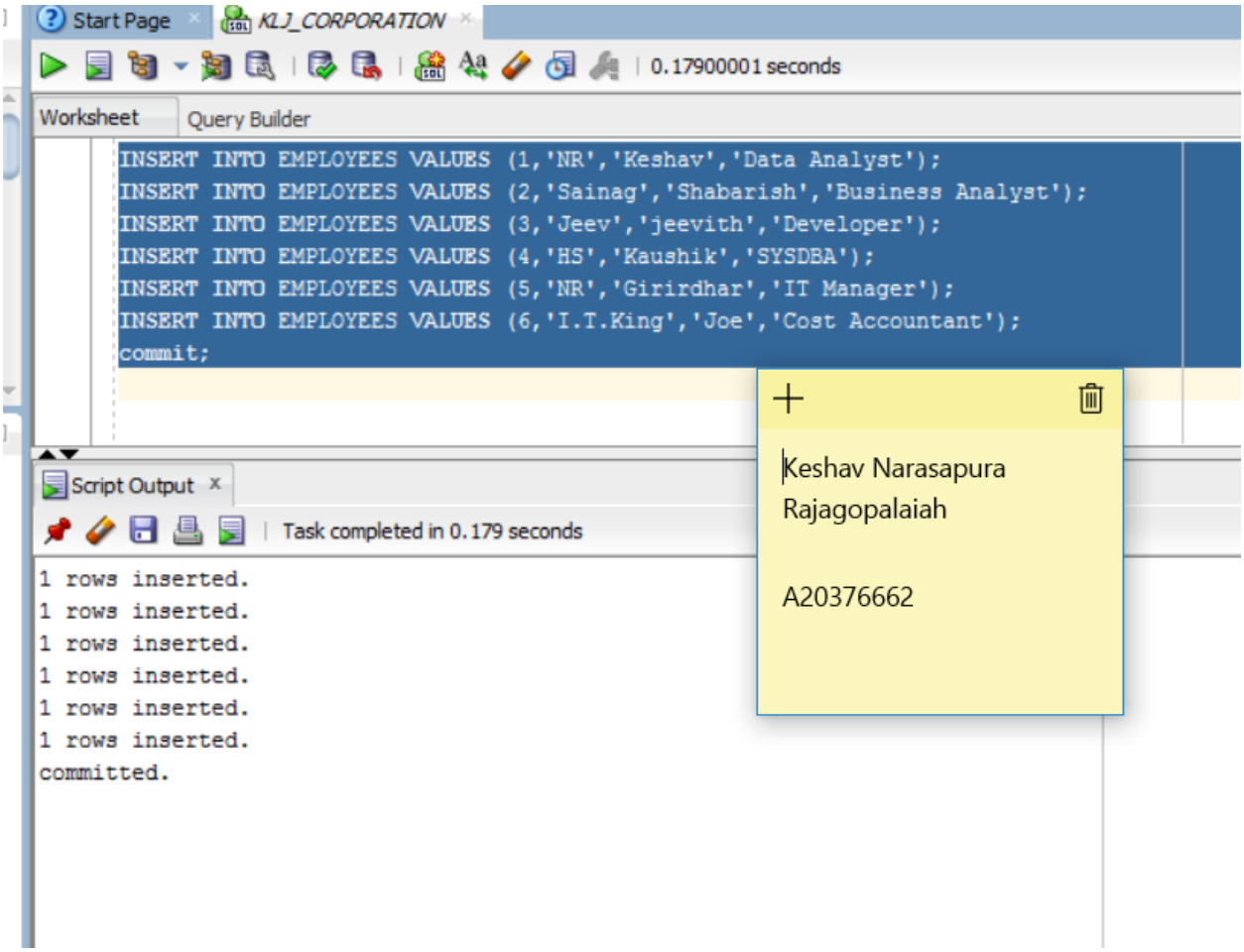
EMP_ID INT NOT NULL,

LAST_NAME VARCHAR2(30),

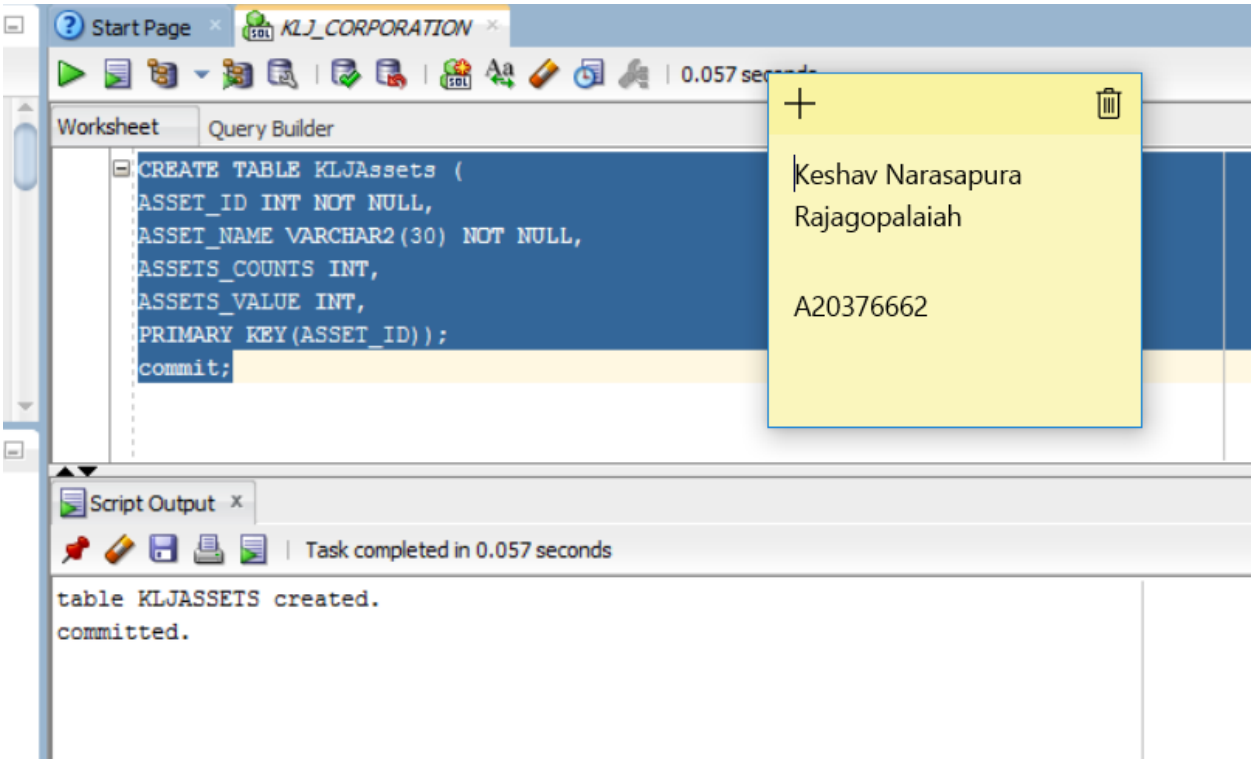
```
FIRST_NAME VARCHAR2(30),
EMP_ROLE VARCHAR2(30),
PRIMARY KEY (EMP_ID));
commit;
```




```
INSERT INTO EMPLOYEES VALUES (1,'NR','Keshav','Data Analyst');
INSERT INTO EMPLOYEES VALUES (2,'Sainag','Shabarish','Business Analyst');
INSERT INTO EMPLOYEES VALUES (3,'Jeev','jeevith','Developer');
INSERT INTO EMPLOYEES VALUES (4,'HS','Kaushik','SYSDBA');
INSERT INTO EMPLOYEES VALUES (5,'NR','Girirdhar','IT Manager');
INSERT INTO EMPLOYEES VALUES (6,'I.T.King','Joe','Cost Accountant');
commit;
```


Start Page
KLJ_CORPORATION
0.17900001 seconds
Worksheet
Query Builder
INSERT INTO EMPLOYEES VALUES (1,'NR','Keshav','Data Analyst');
INSERT INTO EMPLOYEES VALUES (2,'Sainag','Shabarish','Business Analyst');
INSERT INTO EMPLOYEES VALUES (3,'Jeev','jeevith','Developer');
INSERT INTO EMPLOYEES VALUES (4,'HS','Kaushik','SYSDBA');
INSERT INTO EMPLOYEES VALUES (5,'NR','Girirdhar','IT Manager');
INSERT INTO EMPLOYEES VALUES (6,'I.T.King','Joe','Cost Accountant');
commit;
Keshav Narasapura Rajagopalaiah
A20376662
Script Output
Task completed in 0.179 seconds
1 rows inserted.
1 rows inserted.
1 rows inserted.
1 rows inserted.
1 rows inserted.
1 rows inserted.
committed.

DDL Statements to Create KLJAssets Table and Update Data




```
CREATE TABLE KLJAssets (
ASSET_ID INT NOT NULL,
ASSET_NAME VARCHAR2(30) NOT NULL,
ASSETS_COUNTS INT,
ASSETS_VALUE INT,
PRIMARY KEY(ASSET_ID));
commit;
```

The credentials and connection details to log in to MySQL Database

Connection_Name: fp

Username: dbfp

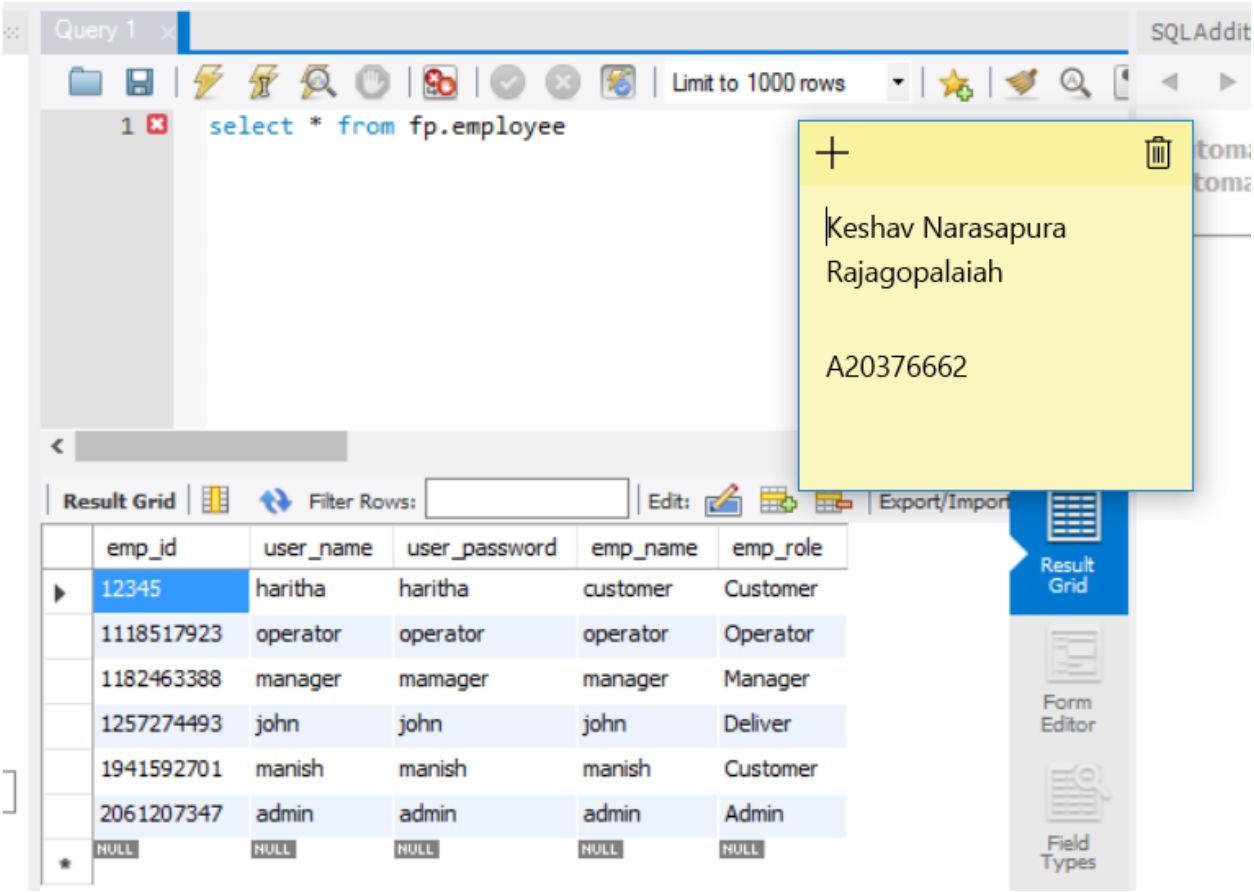
Password: 510

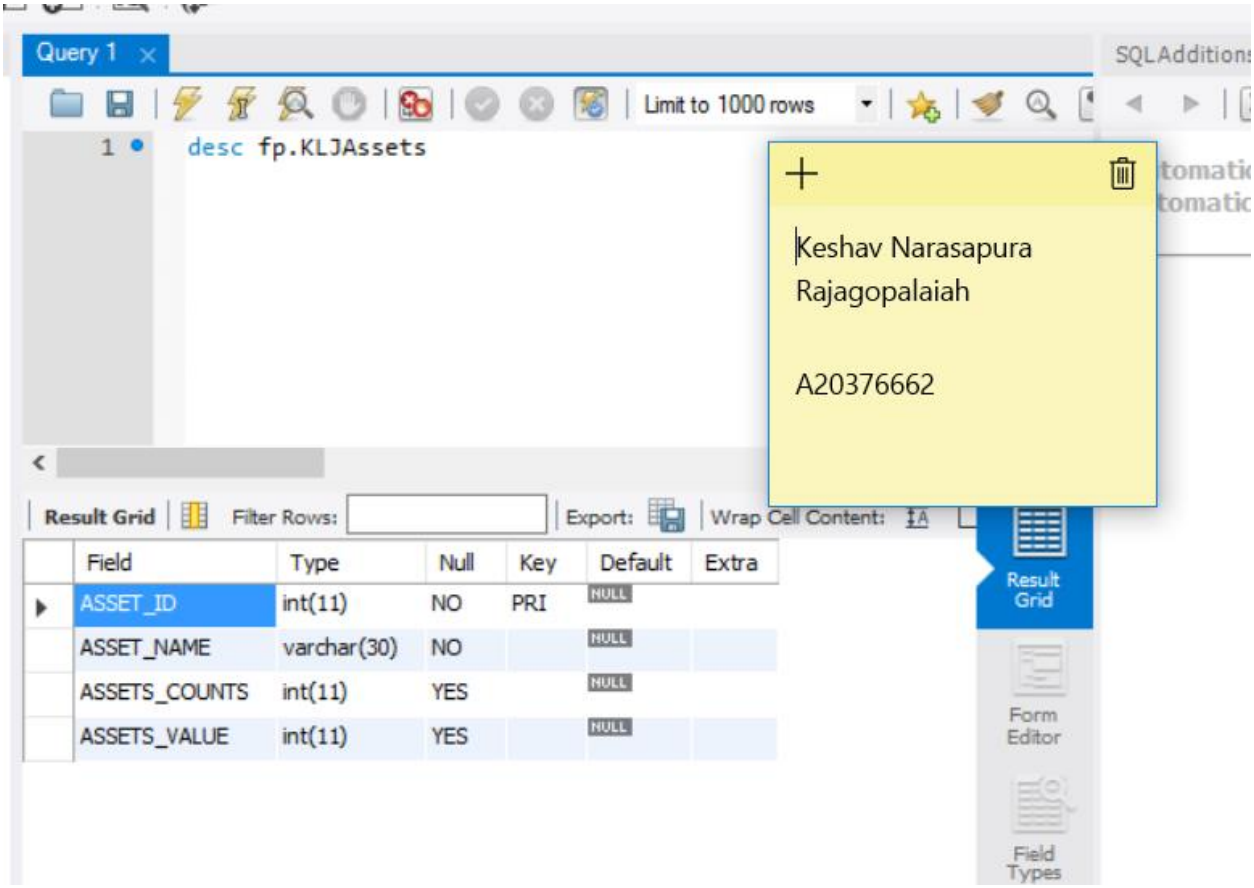
Hostname: www.papademas.net

Port: 3306

In the KLJ_CORPORATION database, employee table is created to store the employee details.

```
CREATE TABLE fp.EMPLOYEES (
EMP_ID INT NOT NULL PRIMARY KEY,
LAST_NAME VARCHAR(30),
FIRST_NAME VARCHAR(30),
EMP_ROLE VARCHAR(30));
commit;
INSERT INTO fp.EMPLOYEES VALUES (1,'NR','Keshav','Data Analyst');
INSERT INTO fp.EMPLOYEES VALUES (2,'Sainag','Shabarish','Business Analyst');
INSERT INTO fp.EMPLOYEES VALUES (3,'Jeev','jeevith','Developer');
INSERT INTO fp.EMPLOYEES VALUES (4,'HS','Kaushik','SYSDBA');
INSERT INTO fp.EMPLOYEES VALUES (5,'NR','Girirdhar','IT Manager');
INSERT INTO fp.EMPLOYEES VALUES (6,'I.T.King','Joe','Cost Accountant');
commit;
```


Query 1
Limit to 1000 rows
1 select * from fp.employee
Keshav Narasapura Rajagopalaiah
A20376662
Result Grid
Filter Rows:
Edit:
Export/Import
emp_id user_name user_password emp_name emp_role
12345 haritha haritha customer Customer
1118517923 operator operator operator Operator
1182463388 manager mamager manager Manager
1257274493 john john john Deliver
1941592701 manish manish manish Customer
2061207347 admin admin admin Admin
NULL NULL NULL NULL NULL
Result Grid
Form Editor
Field Types


Query 1
SQLAdditions
Limit to 1000 rows
1
desc fp.KLJAssets
Keshav Narasapura Rajagopalaiah
A20376662
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
Field
Type
Null
Key
Default
Extra
ASSET_ID
int(11)
NO
PRI
NULL
ASSET_NAME
varchar(30)
NO
NULL
ASSETS_COUNTS
int(11)
YES
NULL
ASSETS_VALUE
int(11)
YES
NULL
Result Grid
Form Editor
Field Types

TASK 2: To Grant Roles and Privileges to Two employees in KLJ Corporation

User KAUSHIK is created to grant roles and Privileges. Since in www.papademas.net server we do not have privilege to create User, Grant roles and privileges, following error is obtained.

SQL statements to Create User, Grant Roles and Privileges are:

CREATE USER KAUSHIK IDENTIFIED BY k_23Kau;

commit;

CREATE USER GIRIDHAR IDENTIFIED BY g_23iri;

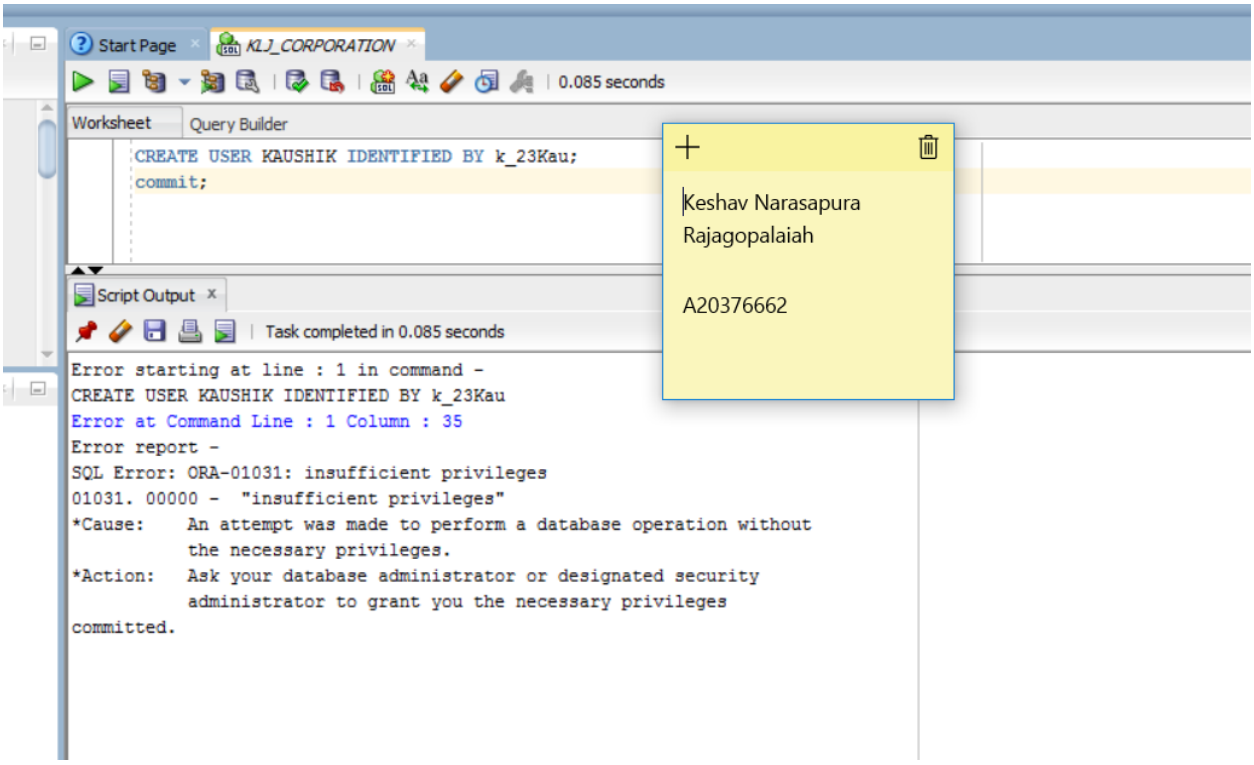
commit;

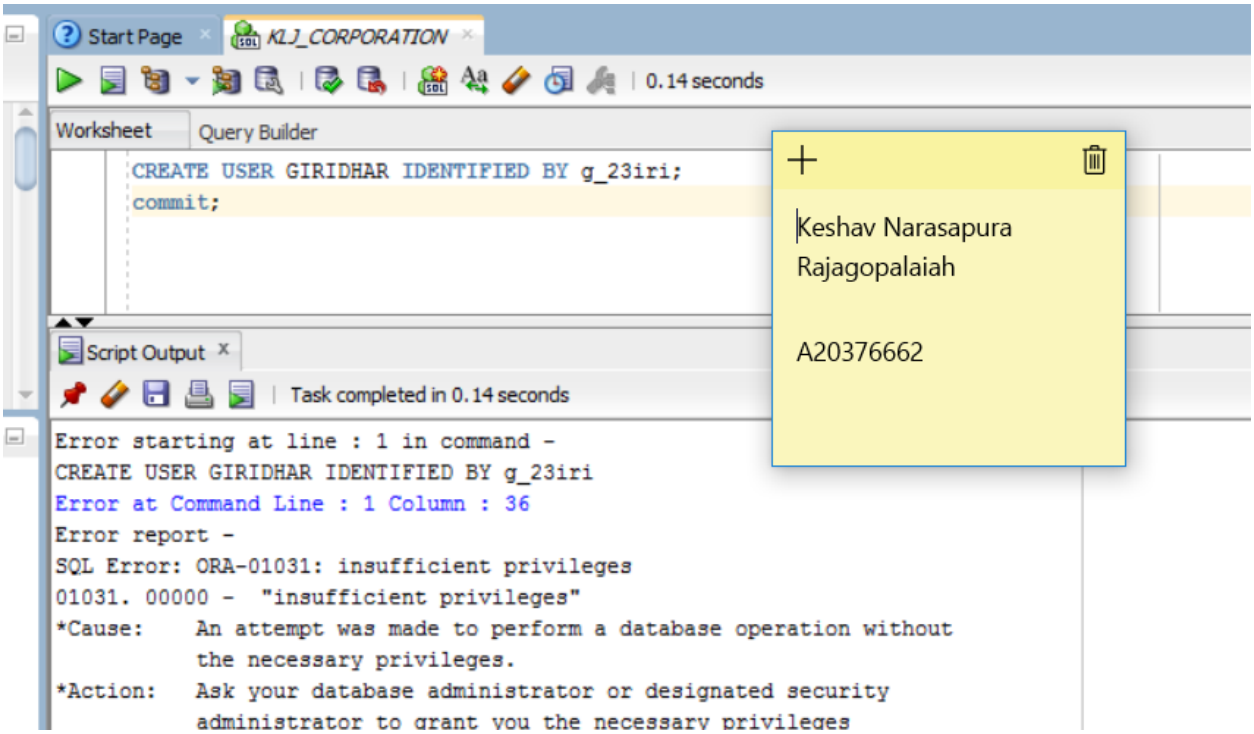
GRANT dba to KAUSHIK;

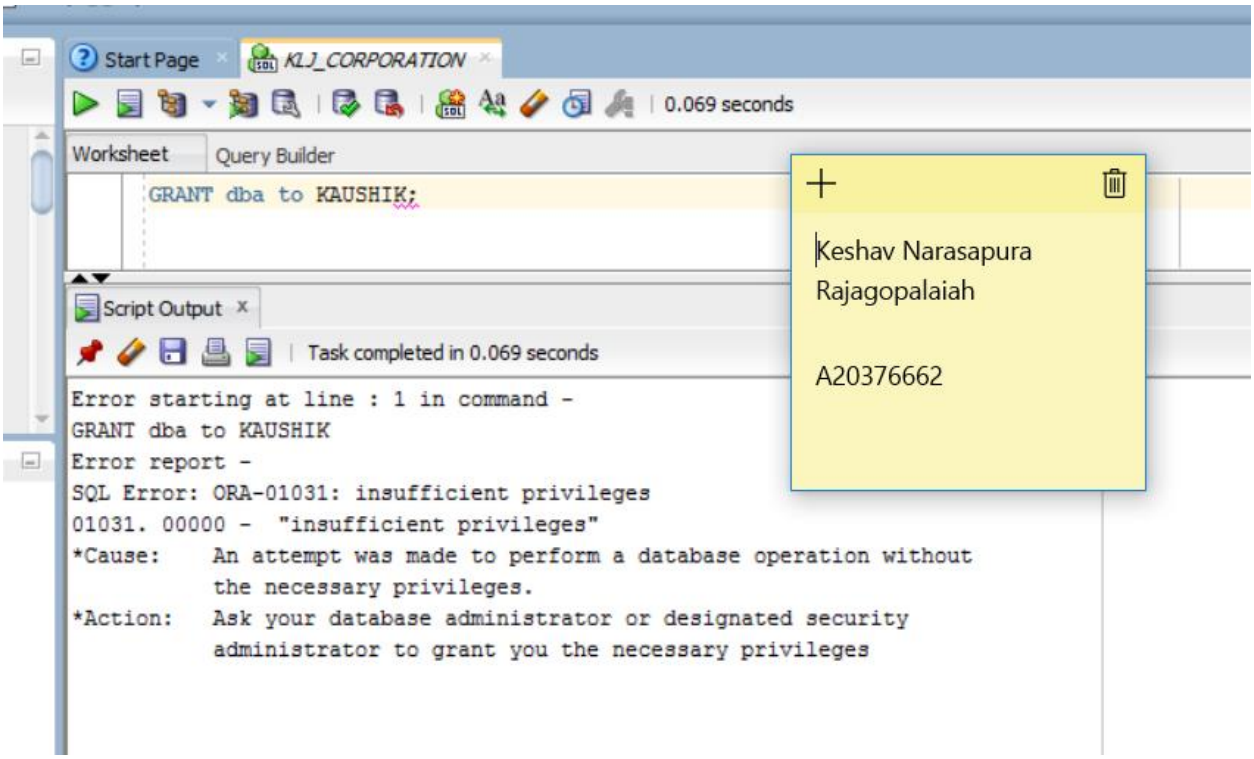
Commit;

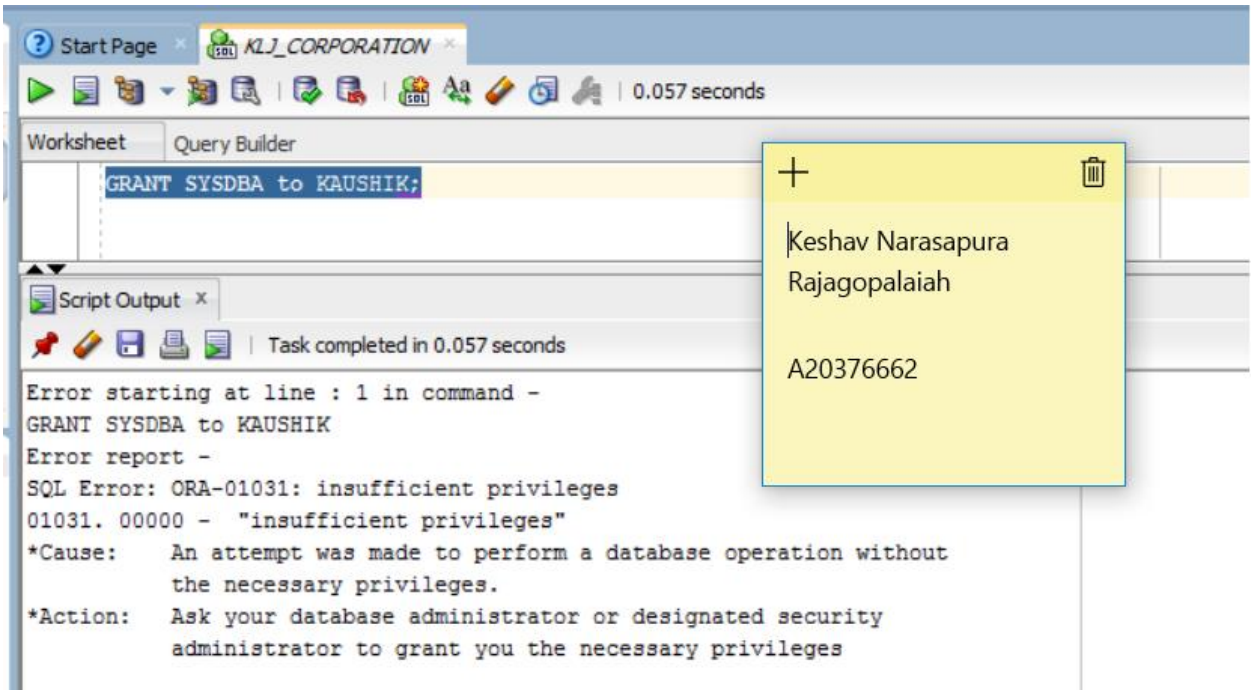
GRANT SYSDBA to KAUSHIK;

Commit;




Start Page
KLJ_CORPORATION
0.14 seconds
Worksheet
Query Builder
CREATE USER GIRIDHAR IDENTIFIED BY g_23iri;
commit;
Keshav Narasapura Rajagopalaiah
A20376662
Script Output
Task completed in 0.14 seconds
Error starting at line : 1 in command -
CREATE USER GIRIDHAR IDENTIFIED BY g_23iri
Error at Command Line : 1 Column : 36
Error report -
SQL Error: ORA-01031: insufficient privileges
01031. 00000 - "insufficient privileges"
*Cause: An attempt was made to perform a database operation without
the necessary privileges.
*Action: Ask your database administrator or designated security
administrator to grant you the necessary privileges


Start Page
KLJ_CORPORATION
0.069 seconds
Worksheet
Query Builder
GRANT dba to KAUSHIK;
Keshav Narasapura Rajagopalaiah
A20376662
Script Output
Task completed in 0.069 seconds
Error starting at line : 1 in command -
GRANT dba to KAUSHIK
Error report -
SQL Error: ORA-01031: insufficient privileges
01031. 00000 - "insufficient privileges"
*Cause: An attempt was made to perform a database operation without
the necessary privileges.
*Action: Ask your database administrator or designated security
administrator to grant you the necessary privileges



MySQL statements to Create User, Grant Roles and Privileges are:

Since we do not have privileges to create user , grant roles and privileges the following statements can be used to give access.

CREATE USER 'KAUSHIK@www.papademas.net' IDENTIFIED BY 'k_23Kau';

CREATE USER 'GIRIDHAR@www.papademas.net' IDENTIFIED IDENTIFIED BY 'g_23iri';

GRANT dba to KAUSHIK;

Commit;

GRANT SYSDBA to KAUSHIK;

Commit;

TASK3: A grant to Joe I.T. King, a cost accountant, to insert, select and update the KLJAsset file

In the EMPLOYEES Table an Employee by First Name Joe is an Cost Accountant. Now following SQL query is used to give GRANT permission to INSERT, SELECT, UPDATE KLJAsset File.

GRANT SELECT, INSERT, UPDATE on KLJAssets to Joe;

Since we do not have privileges to create user, no supporting snapshot of privileges and grant is not available.

TASK4: An XOR encryption of the phrase "KLJ will purchase IBM next Monday"

Attaches Excel sheet contain the XOR operation performed on "KLJ will purchase IBM next Monday"

Given key: k

ASCII Equivalent: 107

XOR_Final Project Fall 2016.xlsx

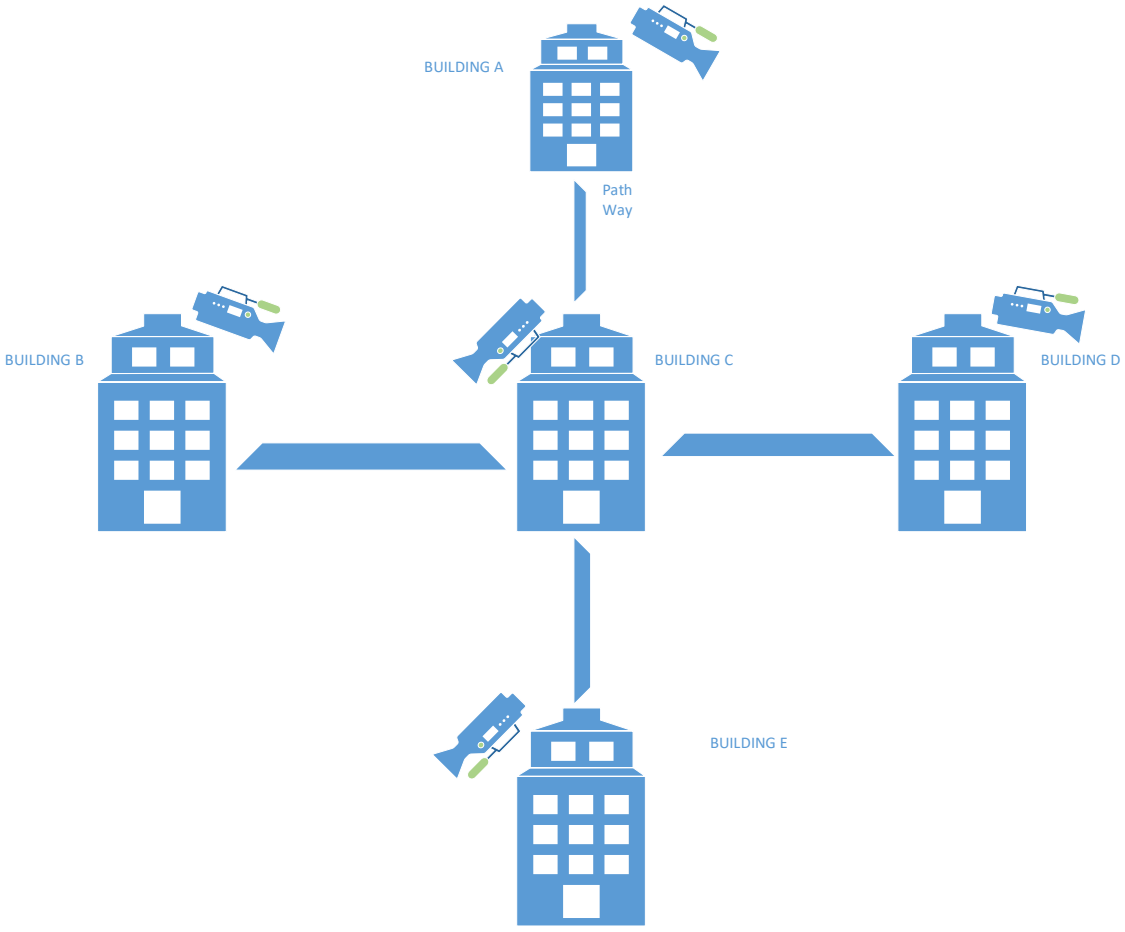
TASK 5: Network Policy

Attached document contains the KLJ Organizations Network Security Policies.

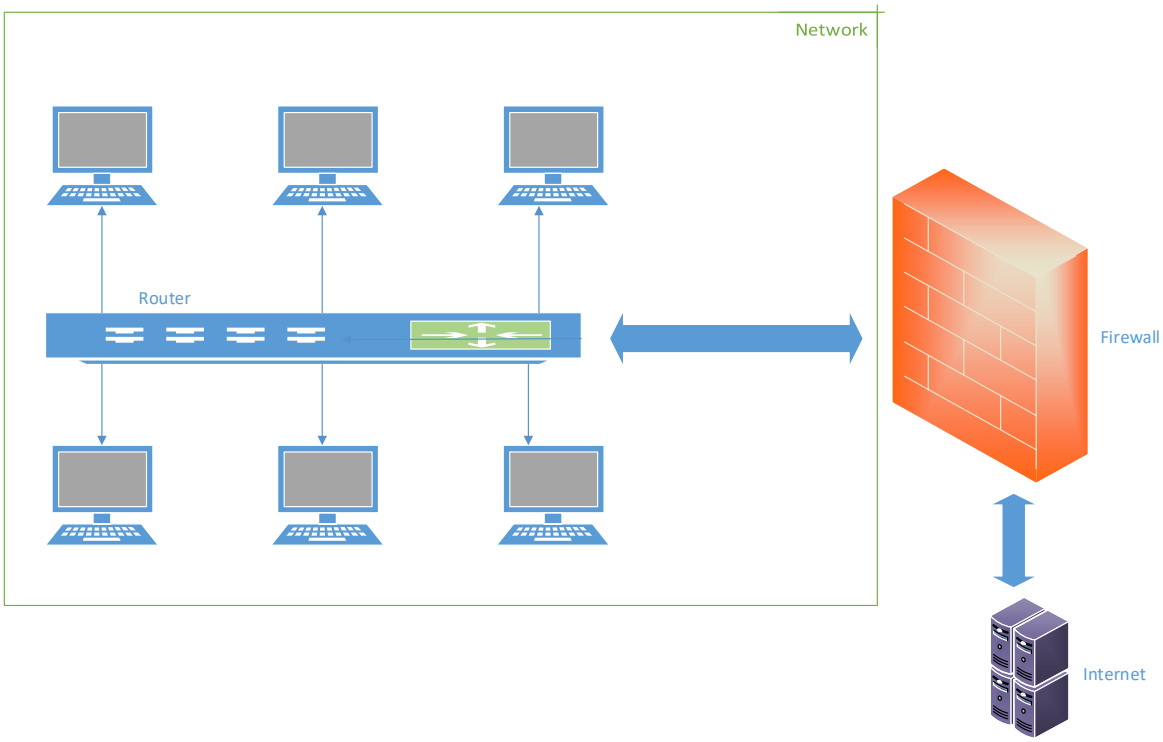
KLJCorporation_Network Security Policy.doc

TASK 6: Potential property with adequate physical security.

The building plan with 5 buildings surrounded by cameras is as follows.



Inside each building, network setup is as follows.



TASK 7: Risk Assessment Spreadsheet

Attached document describes risk assessment.

Risk Assesement.xlsx

TASK 8: Security Plan when a database breach is detected.

Attached document describes security plan when a database breach is detected.

KLJ Security Plan.docx

TASK 9: Usefulness of NoSQL and corresponding security issues.

->NoSQL is the latest BIGDATA Database tool used in market. One of the main advantages of NOSQL is it is available for free. i.e. NOSQL is Open Source.

->NOSQL can be a basic contraption for any association, gigantic or little, that has immense data. Tremendous data is basically any data set that has turned out to be excessively huge, making it impossible to be profitably tackled consistently with standard database mechanical assemblies.

-> NOSQL is a wide class of database administration frameworks that are not customary social database administration frameworks. They don't use SQL as the basic question dialect, nor do they consistently require settled table mappings.

->In like manner, NoSQL is not a lone shipper thing (various NoSQL use are open source), yet rather an umbrella term that can be associated with any of the non-RDBMS immense data elective systems.

Regarding NoSQL Security:

->Designers must add a Security Layer for NoSQL applications.

-> Some of this is driven by perplexity among privately owned businesses about how NoSQL databases can be securely realized. More than once, these associations neglect NoSQL endeavors to build up security - measures that would have been realized as is normally done with standard RDBMS foundations.

TASK 10: Security measures and assessment directed to the client.

-> Because of the efforts to establish safety and hazard evaluation led for KLJ company, the association has a brief thought regarding the system and database dangers they can experience later on furthermore the means to conquer those dangers furthermore they have a thought of how they can set up physical security on their new modern stop.

->The association additionally have an arrangement of crisis systems to conquer any information breaks that may happen.