

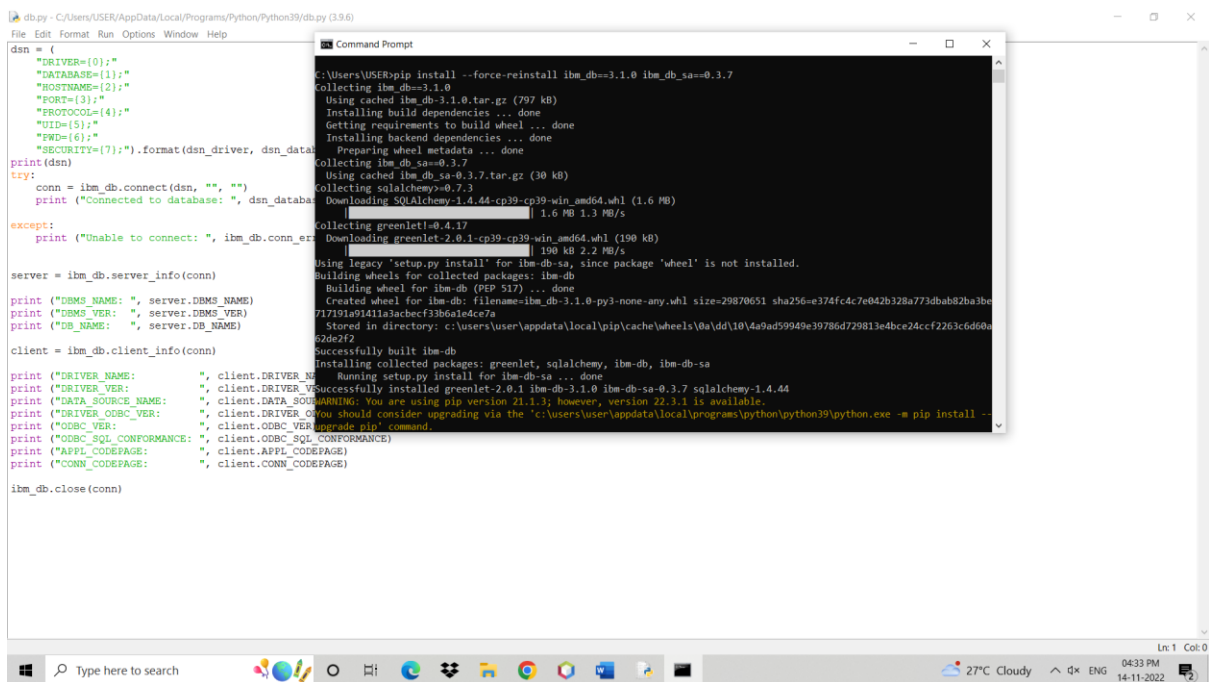
IMPLEMENTING WEB APPLICATION

CREATE IBM DB2 AND CONNECT WITH PYTHON

DATE	14/11/2022
TEAM ID	PNT2022TMID12411
PROJECT NAME	PERSONAL EXPENSE TRACKER APPLICATION

STEP 1: Import the ibm_db Python library

`pip install --force-reinstall ibm_db==3.1.0 ibm_db_sa==0.3.7`



The screenshot shows a Windows desktop environment. On the left, a Notepad++ window displays a Python script for connecting to an IBM DB2 database. The script defines a DSN dictionary with keys for DRIVER, DATABASE, and HOSTNAME, and uses them to connect via ibm_db and ibm_db_sa. It also prints server and client information. On the right, a Command Prompt window shows the execution of the pip install command, which successfully installs the required packages: greenlet, sqlalchemy, ibm-db, and ibm-db-sa. The taskbar at the bottom shows the system clock as 04:33 PM on 14-11-2022.

```
dsn = {
    "DRIVER={0};"
    "DATABASE={1};"
    "HOSTNAME={2};"
    "PORT={3};"
    "PROTOCOL={4};"
    "UID={5};"
    "PWD={6};"
    "SECURITY={7};".format(dsn_driver, dsn_database,
    print(dsn)
try:
    conn = ibm_db.connect(dsn, "", "")
    print ("Connected to database: ", dsn_database)
except:
    print ("Unable to connect: ", ibm_db.conn_errormsg())

server = ibm_db.server_info(conn)
print ("DBMS_NAME: ", server.DBMS_NAME)
print ("DBMS_VER: ", server.DBMS_VER)
print ("DB_NAME: ", server.DB_NAME)

client = ibm_db.client_info(conn)
print ("DRIVER_NAME: ", client.DRIVER_NAME)
print ("DRIVER_VER: ", client.DRIVER_VER)
print ("DATA_SOURCE_NAME: ", client.DATA_SOURCE_NAME)
print ("DRIVER_ODBC_VER: ", client.DRIVER_ODBC_VER)
print ("ODBC_VER: ", client.ODBC_VER)
print ("ODBC_SQL_CONFORMANCE: ", client.ODBC_SQL_CONFORMANCE)
print ("APPL_CODEPAGE: ", client.APPL_CODEPAGE)
print ("CONN_CODEPAGE: ", client.CONN_CODEPAGE)

ibm_db.close(conn)
```

```
C:\Users\USER>pip install --force-reinstall ibm_db==3.1.0 ibm_db_sa==0.3.7
Using cached ibm_db-3.1.0.tar.gz (797 kB)
Installing build dependencies ... done
Getting requirements to build wheel ... done
Installing backend dependencies ... done
Preparing wheel metadata ... done
Collecting ibm_db_sa==0.3.7
Using cached ibm_db_sa-0.3.7.tar.gz (30 kB)
Collecting sqlalchemy>=0.7.3
Downloading SQLAlchemy-1.4.44-cp39-cp39-win_amd64.whl (1.6 MB)
Collecting greenlet<=0.4.17
Downloading greenlet-2.0.1-cp39-cp39-win_amd64.whl (190 kB)
Using legacy 'setup.py install' for ibm-db-sa, since package 'wheel' is not installed.
Building wheels for collected packages: ibm-db
Building wheel for ibm-db (PEP 517) ... done
Created wheel for ibm-db: filename=ibm_db-3.1.0-py3-none-any.whl size=29870651 sha256=e374fc4c7e042b328a773dbab82ba3be71719a91a113acbef336a14c4e7a
Stored in directory: c:\users\user\appdata\local\pip\cache\wheels\0a\dd\10\4a9ad5949e39786d729813e4bce24ccf2263c6d60a62de2f2
Successfully built ibm-db
Installing collected packages: greenlet, sqlalchemy, ibm-db, ibm-db-sa
Running setup.py install for ibm-db-sa ... done
Successfully installed greenlet-2.0.1 ibm-db-3.1.0 ibm-db-sa-0.3.7 sqlalchemy-1.4.44
WARNING: You are using pip version 21.1.3; however, version 22.3.1 is available.
You should consider upgrading via the 'c:\users\user\appdata\local\programs\python\python39\python.exe -m pip install --upgrade pip' command.
```

STEP 2: Create the DB2 database connection

```
dsn = (
    "DRIVER={0};"
    "DATABASE={1};"
    "HOSTNAME={2};"
```

```

"PORT={3};"
"PROTOCOL={4};"
"UID={5};"
"PWD={6};"

"SECURITY={7};").format(dsn_driver, dsn_database, dsn_hostname,
dsn_port, dsn_protocol, dsn_uid, dsn_pwd,dsn_security)
print(dsn)

try:
    conn = ibm_db.connect(dsn, "", "")

    print ("Connected to database: ", dsn_database, "as user: ", dsn_uid, "on host:
", dsn_hostname)

except:
    print ("Unable to connect: ", ibm_db.conn_errormsg() )

server = ibm_db.server_info(conn)
print ("DBMS_NAME: ", server.DBMS_NAME)
print ("DBMS_VER: ", server.DBMS_VER)
print ("DB_NAME: ", server.DB_NAME)
client = ibm_db.client_info(conn)
print ("DRIVER_NAME: ", client.DRIVER_NAME)
print ("DRIVER_VER: ", client.DRIVER_VER)
print ("DATA_SOURCE_NAME: ", client.DATA_SOURCE_NAME)
print ("DRIVER_ODBC_VER: ", client.DRIVER_ODBC_VER)
print ("ODBC_VER: ", client.ODBC_VER)
print ("ODBC_SQL_CONFORMANCE: ",
client.ODBC_SQL_CONFORMANCE)
print ("APPL_CODEPAGE: ", client.APPL_CODEPAGE)
print ("CONN_CODEPAGE: ", client.CONN_CODEPAGE)

ibm_db.close(conn)

```