**CODE**

import sys

import pandas as pd

import pyodbc

# Connect Python and SQL server and perform the following

# a. Connection established – True

# Print => connection established

# else

# Print => connection failed

# b. Create a table for employee : Emp\_no

# and Emp\_name

# c. Insert elements :

# Emp\_no | Emp\_name

# 101 | Bolt

# 102 | Subash

def checkConnection():

    try:

        conn = pyodbc.connect(

            'Driver={SQL Server};'

            'Server=DESKTOP-VOT1DO6\MSSQLSERVER\_NEW;'

            'Database=HelloWorld;'

            'Trusted\_Connection=yes;'

        )

        print("Connection Established")

        return conn

    except Exception as e:

        print("Connection Failed")

def createTable():

    if checkConnection():

        conn = checkConnection()

        cursor = conn.cursor()

        cursor.execute("DROP TABLE IF EXISTS Employee\_3")

        table = "Emp\_no INT, \nEmp\_name VARCHAR(255)"

        if cursor.execute("CREATE TABLE Employee\_3 " + "(" + table + ")"):

            print("Table created successfully")

            conn.commit()

def insertIntoTable():

    if checkConnection():

        conn = checkConnection()

        cursor = conn.cursor()

        insert = "INSERT INTO Employee\_3 (Emp\_no, Emp\_name) VALUES (101, 'Bolt'), (102, 'Subash');"

        if cursor.execute(insert):

            print("Table inserted successfully")

            conn.commit()

# d.    Alter the Employee name Subash to Olando

def alterTableColumn():

    if checkConnection():

        conn = checkConnection()

        cursor = conn.cursor()

        alter = "UPDATE Employee\_3 SET Emp\_name='Olando' WHERE Emp\_no=102;"

        if cursor.execute(alter):

            print("Table column modified successfully")

            conn.commit()

# e.    Also add the following to the table

# Age   Place

# 19    Chennai

# 21    Kingston

# 25    Chennai

def addColumnToTable():

    if checkConnection():

        conn = checkConnection()

        cursor = conn.cursor()

        add = "ALTER TABLE Employee\_3 ADD Age INT, Place VARCHAR(255)"

        if cursor.execute(add):

            print("New Columns added successfully")

            update = "UPDATE Employee\_3 SET Age=19, Place='Chennai' WHERE Emp\_no=101;"

            update = update + "UPDATE Employee\_3 SET Age=21, Place='Kingston' WHERE Emp\_no=102;"

            update = update + "INSERT INTO Employee\_3 (Emp\_no, Emp\_name, Age, Place) VALUES (103, 'Harini', 25, 'Chennai');"

            if cursor.execute(update):

                print("Columns updated successfully")

                conn.commit()

# f.    Check the condition and retrieve the details from the table

# i.    The age from the table if the age is above 20

# ii.   The place is Chennai

# iii.  The age is above 20 and place is Chennai

def queryTable():

    if checkConnection():

        conn = checkConnection()

        cursor = conn.cursor()

        ageAbove21 = "SELECT Emp\_name, Age FROM Employee\_3 WHERE Age > 20;"

        if cursor.execute(ageAbove21):

            print("\nThe age from the table if the age is above 20")

            for r in cursor.fetchall():

                print(r)

        place = "SELECT \* FROM Employee\_3 WHERE Place='Chennai';"

        if cursor.execute(place):

            print("\nWhere the place is Chennai")

            for r in cursor.fetchall():

                print(r)

        agePlace = "SELECT \* FROM Employee\_3 WHERE Age > 20 AND Place='Chennai';"

        if cursor.execute(agePlace):

            print("\nThe age is above 20 and place is Chennai")

            for r in cursor.fetchall():

                print(r)

def main():

    # checkConnection()

    # createTable()

    # insertIntoTable()

    # alterTableColumn()

    # addColumnToTable()

    queryTable()

if \_\_name\_\_ == "\_\_main\_\_":

    main()

**OUTPUTS**









