**TASK 1**

Q1. Establish connectivity with a SQL Server database using Python. The database is hosted on a remote server, and you need to provide the necessary credentials to establish the connection.

Code/commands:

Import pyodbc Module:

pip install pyodbc

import pyodbc

Establish Connection to SQL Server:

server = 'Project\_server'

database = 'CompanyDB'

username = 'your\_username'

password = 'your\_password123'

cnxn = pyodbc.connect('DRIVER={ODBC Driver 17 for SQL Server};\

SERVER='+server+';\

DATABASE='+database+';\

UID='+username+';\

PWD='+ password)

Create Cursor Object and Execute SQL Queries

cursor = cnxn.cursor()

query = "SELECT \* FROM employees"

cursor.execute(query)

row = cursor.fetchone()

while row:

print(row)

row = cursor.fetchone()

# Fetch all rows at once

rows = cursor.fetchall()

for row in rows:

print(row)

cursor.close()

Retrieve Data from SQL Server

import pandas as pd

import pyodbc

# Set up connection

cnxn = pyodbc.connect('DRIVER={SQL Server};SERVER=localhost;DATABASE=mydatabase;UID=username;PWD=password')

# Define SQL query

query = 'SELECT \* FROM employees'

# Execute query and store results in a DataFrame

df = pd.read\_sql\_query(query, cnxn)

# Print first few rows of DataFrame

print(df.head())

Close Connection to SQL Server

import pyodbc

# Establishing a connection to SQL Server

connection = pyodbc.connect('Driver={SQL Server};'

'Server=server\_name;'

'Database=database\_name;'

'Trusted\_Connection=yes;')

# Creating a cursor object

cursor = connection.cursor()

# Executing SQL queries

cursor.execute('SELECT \* FROM table\_name')

data = cursor.fetchall()

# Closing the connection

connection.close()

Name-Diptimayee Pradhan

Roll no-21051305

KIIT University