

Experiment 2

Oracle Database Connectivity (Python)

Program:

```
iimport oracledb

USERNAME = "sachi"
PASSWORD = "lab3"
HOST = "localhost"
PORT = 1521
SERVICE_NAME = "XE"

try:
    dsn = f"{HOST}:{PORT}/{SERVICE_NAME}"
    connection = oracledb.connect(user=USERNAME, password=PASSWORD, dsn=dsn)
    print("Successfully connected to Oracle Database!")
    print(f"Connected as: {USERNAME}@{SERVICE_NAME}\n")

    cursor = connection.cursor()
    cursor.execute("SELECT * FROM v$version WHERE banner LIKE 'Oracle%'")
    version = cursor.fetchone()
    print("Database version:")
    print(version[0])
    print()

    cursor.execute("SELECT SYSDATE, USER FROM dual")
    row = cursor.fetchone()
    print("Current database date and user:")
    print(row)
    print()

    print("Listing first 5 tables owned by current user:")
    cursor.execute("""
        SELECT table_name
        FROM user_tables
        FETCH FIRST 5 ROWS ONLY
    """)
    for r in cursor:
        print(" -", r[0])

except oracledb.Error as e:
    print("Oracle Database error occurred:")
    print(e)

finally:
    if 'cursor' in locals():
        cursor.close()
    if 'connection' in locals():
        connection.close()
        print("\nConnection closed.")
```

Expected Console Output:

```
Successfully connected to Oracle Database!
Connected as: sachin@XE

Database version:
Oracle Database 21c Express Edition Release 21.0.0.0.0 - Production
...
Connection closed.
```