Program Code –

```python
import oracledb

oracledb.init_oracle_client(lib_dir=r"C:\app\kotka\product\21c\dbhomeXE\BIN")


conn = oracledb.connect(user="system", password="1606", dsn=None)

cursor = conn.cursor()

print("Connected to Oracle XE (Thick Mode)")


def add_student():

    sid = int(input("Enter Student ID: "))

    name = input("Enter Student Name: ")

    dept = input("Enter Department: ")

    cursor.execute("INSERT INTO Student (stud_id, stud_name, dept) VALUES (:1, :2, :3)", (sid, name, dept))

    conn.commit()

    print("Student Added Successfully")


def view_students():

    cursor.execute("SELECT * FROM Student ORDER BY stud_id")

    rows = cursor.fetchall()

    if not rows:

        print("⚠ No Records Found")

    else:

        print("\n--- Student Records ---")

        for r in rows:

            print(f"ID: {r[0]}, Name: {r[1]}, Dept: {r[2]}")


def update_student():

    sid = int(input("Enter Student ID to Update: "))

    new_name = input("Enter New Name: ")

    cursor.execute("UPDATE Student SET stud_name=:1 WHERE stud_id=:2", (new_name, sid))

    conn.commit()

    print("Student Updated Successfully")


def delete_student():

    sid = int(input("Enter Student ID to Delete: "))

    cursor.execute("DELETE FROM Student WHERE stud_id=:1", (sid,))

    conn.commit()

    print("Student Deleted Successfully")


# ---------- Menu ----------
while True:

    print("\n===== Student Database Menu =====")

    print("1. Add Student")

    print("2. View Students")

    print("3. Update Student")

    print("4. Delete Student")

    print("5. Exit")

    choice = input("Enter choice: ")


    if choice == "1":

        add_student()

    elif choice == "2":

        view_students()

    elif choice == "3":

        update_student()

    elif choice == "4":

        delete_student()

    elif choice == "5":

        print("Exiting Program...")
```

```python
        break
    else:
        print("Invalid Choice. Try Again!")
```

```python
# ---------- Close Connection ----------
cursor.close()
conn.close()
```

Output –

```
SQL Plus                    ×    +   ∨

SQL*Plus: Release 21.0.0.0.0 - Production on Mon Sep 29 11:26:55 2025
Version 21.3.0.0.0

Copyright (c) 1982, 2021, Oracle.  All rights reserved.

Enter user-name: system
Enter password:
Last Successful login time: Tue Sep 16 2025 14:34:55 +05:30

Connected to:
Oracle Database 21c Express Edition Release 21.0.0.0.0 - Production
Version 21.3.0.0.0

SQL> CREATE TABLE Student (
  2      stud_id INT PRIMARY KEY,
  3      stud_name VARCHAR(50),
  4      dept VARCHAR(20)
  5  );

Table created.
```

```
Windows PowerShell          ×    +   ∨

PS C:\Users\kotka\Downloads> python student_nav.py
Connected to Oracle XE (Thick Mode)

===== Student Database Menu =====
1. Add Student
2. View Students
3. Update Student
4. Delete Student
5. Exit
Enter choice: 1
Enter Student ID: 101
Enter Student Name: Ram
Enter Department: CSE
Student Added Successfully

===== Student Database Menu =====
1. Add Student
2. View Students
3. Update Student
4. Delete Student
5. Exit
Enter choice: 1
Enter Student ID: 102
Enter Student Name: Rakesh
Enter Department: ENTC
Student Added Successfully

===== Student Database Menu =====
1. Add Student
2. View Students
3. Update Student
4. Delete Student
5. Exit
Enter choice: 2

--- Student Records ---
ID: 101, Name: Ram, Dept: CSE
ID: 102, Name: Rakesh, Dept: ENTC

===== Student Database Menu =====
```

```
Windows PowerShell          ×    +   ∨

ID: 102, Name: Rakesh, Dept: ENTC

===== Student Database Menu =====
1. Add Student
2. View Students
3. Update Student
4. Delete Student
5. Exit
Enter choice: 3
Enter Student ID to Update: 101
Enter New Name: Ram
Student Updated Successfully

===== Student Database Menu =====
1. Add Student
2. View Students
3. Update Student
4. Delete Student
5. Exit
Enter choice: 4
Enter Student ID to Delete: 101
Student Deleted Successfully

===== Student Database Menu =====
1. Add Student
2. View Students
3. Update Student
4. Delete Student
5. Exit
Enter choice: 5
Exiting Program...
PS C:\Users\kotka\Downloads> |
```

```
SQL Plus                    ×    +   ∨

SQL> select * from Student;

   STUD_ID STUD_NAME                DEPT
---------- ------------------------ --------------------
       102 Rakesh                   ENTC

SQL> |
```