

## IMPLEMENTATION

```
import re
import mysql.connector
from mysql.connector import Error

def create_connection():
    try:
        connection = mysql.connector.connect(
            host='localhost',
            database='student_system',
            user='root',
            password='Password@01'
        )
        return connection
    except Error as e:
        print(f"Error: {e}")
        return None

def register():
    print("=== Register ===")
    username = input("Enter username: ")

    connection = create_connection()
    if connection is None:
        return

    cursor = connection.cursor()
    cursor.execute("SELECT * FROM students WHERE username = %s", (username,))

    if cursor.fetchone():
        print("Username already exists. Please choose another.")
        cursor.close()
        connection.close()
        return

    password = input("Enter password: ")
    name = input("Enter your name: ")
    contact = input("Enter contact details: ")
    email = input("Enter email: ")

    if not re.match(r"^[^@]+@[^@]+\.[^@]+", email):
```

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        print("Invalid email format. Please try again.")
        cursor.close()
        connection.close()
        return

    city = input("Enter city: ")
    department = input("Enter department: ")
    student_id = input("Enter student ID: ")

    cursor.execute(
        "INSERT INTO students (username, password, name, contact, email, city,
department, student_id) VALUES (%s, %s, %s, %s, %s, %s, %s, %s)",
        (username, password, name, contact, email, city, department, student_id)
    )
    connection.commit()
    print("Registration successful!")

    cursor.close()
    connection.close()

def login():
    print("=== Login ===")
    username = input("Enter username: ")

    connection = create_connection()
    if connection is None:
        return None

    cursor = connection.cursor(dictionary=True)
    cursor.execute("SELECT * FROM students WHERE username = %s", (username,))
    user = cursor.fetchone()

    if not user:
        print("Username does not exist. Please register first.")
        cursor.close()
        connection.close()
        return None

    password = input("Enter password: ")

    if user['password'] == password:
        print(f"Login successful! Welcome back, {user['name']}!")
        cursor.close()
        connection.close()
        return username

```

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else:
    print("Incorrect password. Please try again.")
    cursor.close()
    connection.close()
    return None

def view_profile(username):
    print("=== View Profile ===")

    connection = create_connection()
    if connection is None:
        return

    cursor = connection.cursor(dictionary=True)
    cursor.execute("SELECT * FROM students WHERE username = %s", (username,))
    profile = cursor.fetchone()

    if profile:
        for key, value in profile.items():
            if key != 'password':
                print(f"{key.capitalize()}: {value}")
    else:
        print("Profile not found.")

    cursor.close()
    connection.close()

def update_profile(username):
    print("=== Update Profile ===")

    connection = create_connection()
    if connection is None:
        return

    cursor = connection.cursor(dictionary=True)
    cursor.execute("SELECT * FROM students WHERE username = %s", (username,))
    profile = cursor.fetchone()

    if profile:
        print("Leave blank to keep current value.")
        name = input(f"Name ({profile['name']}): ") or profile['name']
        contact = input(f"Contact ({profile['contact']}): ") or
profile['contact']
        email = input(f"Email ({profile['email']}): ") or profile['email']
        city = input(f"City ({profile['city']}): ") or profile['city']

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        department = input(f"Department ({profile['department']}): ") or
profile['department']
        student_id = input(f"Student ID ({profile['student_id']}): ") or
profile['student_id']

        cursor.execute(
            """
            UPDATE students
            SET name = %s, contact = %s, email = %s, city = %s, department = %s,
student_id = %s
            WHERE username = %s
            """,
            (name, contact, email, city, department, student_id, username)
        )
        connection.commit()
        print("Profile updated successfully!")
    else:
        print("User not found.")

    cursor.close()
    connection.close()

def delete_account(username):
    print("=== Delete Account ===")

    connection = create_connection()
    if connection is None:
        return

    cursor = connection.cursor()
    confirm = input("Are you sure you want to delete your account? (yes/no):
").lower()
    if confirm == 'yes':
        cursor.execute("DELETE FROM students WHERE username = %s", (username,))
        connection.commit()
        print("Account deleted successfully.")
    else:
        print("Account deletion cancelled.")

    cursor.close()
    connection.close()

def main():
    current_user = None
    while True:

```

```
print("\n=== Student Management System ===")
print("1. Register")
print("2. Login")
print("3. View Profile")
print("4. Update Profile")
print("5. Delete Account")
print("6. Exit")

choice = input("Choose an option: ")

if choice == '1':
    register()
elif choice == '2':
    current_user = login()
elif choice == '3':
    if current_user:
        view_profile(current_user)
    else:
        print("Please log in first.")
elif choice == '4':
    if current_user:
        update_profile(current_user)
    else:
        print("Please log in first.")
elif choice == '5':
    if current_user:
        delete_account(current_user)
        current_user = None
    else:
        print("Please log in first.")
elif choice == '6':
    print("Exiting the system.")
    break
else:
    print("Invalid choice. Please try again.")

if __name__ == "__main__":
    main()
```

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Information

Schema: student\_system

Object Info Session

Query 1 students

Limit to 1000 rows

1 • SELECT \* FROM student\_system.students;

Result Grid

| id | username | password | name         | contact    | email            | city   | department | student_id |
|----|----------|----------|--------------|------------|------------------|--------|------------|------------|
| 1  | ritu1    | ritu2    | ritu         | 8767365467 | ritu@gmail.com   | kalyan | ce         | 33         |
| 2  | Devika1  | devika2  | Devika Parab | 7764561128 | devika@gmail.com | Pune   | IT         | 11         |

students 1 x

Output

Action Output

| # | Time     | Action  | Message           | Duration / Fetch      |
|---|----------|---|-------------------|-----------------------|
| 1 | 15:29:33 | SELECT * FROM student_system.students LIMIT 0, 1000 | 2 row(s) returned | 0.000 sec / 0.000 sec |

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

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Information

Schema: student\_system

Query 1 students student\_system.students students

Limit to 1000 rows

1 • SELECT \* FROM student\_system.students;

Result Grid

| id | username | password | name         | contact    | email            | city   | department | student_id |
|----|----------|----------|--------------|------------|------------------|--------|------------|------------|
| 1  | ritu1    | ritu2    | ritu         | 8767365467 | ritu@gmail.com   | kalyan | ce         | 33         |
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students 1 x

Output

Action Output

| # | Time     | Action  | Message           | Duration / Fetch      |
|---|----------|---|-------------------|-----------------------|
| 1 | 15:29:33 | SELECT * FROM student_system.students LIMIT 0, 1000 | 2 row(s) returned | 0.000 sec / 0.000 sec |
| 2 | 15:31:28 | SELECT * FROM student_system.students LIMIT 0, 1000 | 2 row(s) returned | 0.000 sec / 0.000 sec |

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

```
app.py > ...
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1. Register
2. Login
3. View Profile
4. Update Profile
5. Delete Account
6. Exit
Choose an option: 3
=== View Profile ===
Id: 2
Username: Devika1
Name: Devika Parab
Contact: 7764561128
Email: devika@gmail.com
City: Dadar
Department: IT
Student_id: 11

=== Student Management System ===
```

```
app.py > ...
1 import re
2 import mysql.connector
3 from mysql.connector import Error
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5
6 def create_connection():
7     try:
8         connection = mysql.connector.connect(
9             host='localhost',
10            database='student_system',
11            user='root',
12            password='Password@01'
13        )
14        return connection
15    except Error as e:
16        print(f"Error: {e}")
17        return None
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19 def register():
20     print("=== Register ===")
21     username = input("Enter username: ")
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