```
import csv
import os

FILENAME = "students.csv"

# ✅ Initialize CSV file with headers (if not already present)
if not os.path.exists(FILENAME):
    with open(FILENAME, "w", newline="") as file:
        writer = csv.writer(file)
        writer.writerow(["Roll No", "Name", "Course", "Email"])
```

```
def register_student():
    roll = input("Enter Roll No: ")
    name = input("Enter Name: ")
    course = input("Enter Course: ")
    email = input("Enter Email: ")

    with open(FILENAME, "a", newline="") as file:
        writer = csv.writer(file)
        writer.writerow([roll, name, course, email])
        print("✅ Student Registered Successfully!\n")
```

```
def view_students():
    with open(FILENAME, "r") as file:
        reader = csv.reader(file)
        for row in reader:
            print(row)
```

```
def search_student():
    roll = input("Enter Roll No to Search: ")
    found = False
    with open(FILENAME, "r") as file:
        reader = csv.reader(file)
        for row in reader:
            if row[0] == roll:
                print("🎓 Student Found:", row)
                found = True
                break
    if not found:
        print("❌ Student Not Found")
```

```
def update_student():
    roll = input("Enter Roll No to Update: ")
    updated_rows = []
    found = False

    with open(FILENAME, "r") as file:
        reader = csv.reader(file)
        for row in reader:
            if row[0] == roll:
                print("Old Record:", row)
                name = input("Enter New Name: ")
                course = input("Enter New Course: ")
                email = input("Enter New Email: ")
                updated_rows.append([roll, name, course, email])
                found = True
            else:
                updated_rows.append(row)

    with open(FILENAME, "w", newline="") as file:
        writer = csv.writer(file)
        writer.writerows(updated_rows)

    if found:
        print("✅ Record Updated Successfully!")
    else:
        print("❌ Student Not Found")
```

```
def delete_student():
    roll = input("Enter Roll No to Delete: ")
    updated_rows = []
    found = False
```

```
    with open(FILENAME, "r") as file:
        reader = csv.reader(file)
        for row in reader:
            if row[0] != roll:
                updated_rows.append(row)
            else:
                found = True

    with open(FILENAME, "w", newline="") as file:
        writer = csv.writer(file)
        writer.writerows(updated_rows)

    if found:
        print("🗑️ Student Deleted Successfully!")
    else:
        print("❌ Student Not Found")
```

```
def main():
    while True:
        print("\n=== 🎓 Student Registration System ===")
        print("1. Register Student")
        print("2. View All Students")
        print("3. Search Student")
        print("4. Update Student")
        print("5. Delete Student")
        print("6. Exit")

        choice = input("Enter choice: ")

        if choice == "1":
            register_student()
        elif choice == "2":
            view_students()
        elif choice == "3":
            search_student()
        elif choice == "4":
            update_student()
        elif choice == "5":
            delete_student()
        elif choice == "6":
            print("👋 Exiting...")
            break
        else:
            print("❌ Invalid Choice")

main()
```

```
=== 🎓 Student Registration System ===
1. Register Student
2. View All Students
3. Search Student
4. Update Student
5. Delete Student
6. Exit
✅ Student Registered Successfully!


=== 🎓 Student Registration System ===
1. Register Student
2. View All Students
3. Search Student
4. Update Student
5. Delete Student
6. Exit
['Roll No', 'Name', 'Course', 'Email']
['987654321', 'Vipin', 'AI and ML', 'vipin@gmail.com']

=== 🎓 Student Registration System ===
1. Register Student
2. View All Students
3. Search Student
4. Update Student
5. Delete Student
6. Exit
🗑️ Student Deleted Successfully!

=== 🎓 Student Registration System ===
1. Register Student
2. View All Students
3. Search Student
4. Update Student
```

```
5. Delete Student
6. Exit
```