In [1]:

```python
import csv

student_fields = ['roll', 'name', 'age', 'email', 'phone']
student_database = 'students.csv'


def display_menu():
    print("----------------------------------------")
    print(" Welcome to Student Management System")
    print("----------------------------------------")
    print("1. Add New Student")
    print("2. View Students")
    print("3. Search Student")
    print("4. Update Student")
    print("5. Delete Student")
    print("6. Quit")


def add_student():
    print("------------------------")
    print("Add Student Information")
    print("------------------------")
    global student_fields
    global student_database

    student_data = []
    for field in student_fields:
        value = input("Enter " + field + ": ")
        student_data.append(value)

    with open(student_database, "a", encoding="utf-8") as f:
        writer = csv.writer(f)
        writer.writerows([student_data])

    print("Data saved successfully")
    input("Press any key to continue")
    return


def view_students():
    global student_fields
    global student_database

    print("--- Student Records ---")

    with open(student_database, "r", encoding="utf-8") as f:
        reader = csv.reader(f)
        for x in student_fields:
            print(x, end='\t |')
        print("\n----------------------------------------------------

        for row in reader:
            for item in row:
                print(item, end="\t |")
            print("\n")

    input("Press any key to continue")
```

```
58
59
60  def search_student():
61      global student_fields
62      global student_database
63
64      print("--- Search Student ---")
65      roll = input("Enter roll no. to search: ")
66      with open(student_database, "r", encoding="utf-8") as f:
67          reader = csv.reader(f)
68          for row in reader:
69              if len(row) > 0:
70                  if roll == row[0]:
71                      print("----- Student Found -----")
72                      print("Roll: ", row[0])
73                      print("Name: ", row[1])
74                      print("Age: ", row[2])
75                      print("Email: ", row[3])
76                      print("Phone: ", row[4])
77                      break
78          else:
79              print("Roll No. not found in our database")
80      input("Press any key to continue")
81
82
83  def update_student():
84      global student_fields
85      global student_database
86
87      print("--- Update Student ---")
88      roll = input("Enter roll no. to update: ")
89      index_student = None
90      updated_data = []
91      with open(student_database, "r", encoding="utf-8") as f:
92          reader = csv.reader(f)
93          counter = 0
94          for row in reader:
95              if len(row) > 0:
96                  if roll == row[0]:
97                      index_student = counter
98                      print("Student Found: at index ",index_student)
99                      student_data = []
100                     for field in student_fields:
101                         value = input("Enter " + field + ": ")
102                         student_data.append(value)
103                     updated_data.append(student_data)
104                 else:
105                     updated_data.append(row)
106                 counter += 1
107
108
109     # Check if the record is found or not
110     if index_student is not None:
111         with open(student_database, "w", encoding="utf-8") as f:
112             writer = csv.writer(f)
113             writer.writerows(updated_data)
114     else:
```

```python
115            print("Roll No. not found in our database")
116
117        input("Press any key to continue")
118
119
120    def delete_student():
121        global student_fields
122        global student_database
123
124        print("--- Delete Student ---")
125        roll = input("Enter roll no. to delete: ")
126        student_found = False
127        updated_data = []
128        with open(student_database, "r", encoding="utf-8") as f:
129            reader = csv.reader(f)
130            counter = 0
131            for row in reader:
132                if len(row) > 0:
133                    if roll != row[0]:
134                        updated_data.append(row)
135                        counter += 1
136                    else:
137                        student_found = True
138
139        if student_found is True:
140            with open(student_database, "w", encoding="utf-8") as f:
141                writer = csv.writer(f)
142                writer.writerows(updated_data)
143            print("Roll no. ", roll, "deleted successfully")
144        else:
145            print("Roll No. not found in our database")
146
147        input("Press any key to continue")
148
149    while True:
150        display_menu()
151
152        choice = input("Enter your choice: ")
153        if choice == '1':
154            add_student()
155        elif choice == '2':
156            view_students()
157        elif choice == '3':
158            search_student()
159        elif choice == '4':
160            update_student()
161        elif choice == '5':
162            delete_student()
163        else:
164            break
165
166    print("--------------------------------")
167    print(" Thank you for using our system")
168    print("--------------------------------")
```

```
----------------------------------------
 Welcome to Student Management System
----------------------------------------
1. Add New Student
2. View Students
3. Search Student
4. Update Student
5. Delete Student
6. Quit
Enter your choice: 1
-------------------------
Add Student Information
-------------------------
Enter roll: 13354
Enter name: kaushal taware
Enter age: 20
Enter email: abc@gmail.com
Enter phone: 2847361919
Data saved successfully
Press any key to continue1
----------------------------------------
 Welcome to Student Management System
----------------------------------------
1. Add New Student
2. View Students
3. Search Student
4. Update Student
5. Delete Student
6. Quit
Enter your choice: 1
-------------------------
Add Student Information
-------------------------
Enter roll: 13262
Enter name: akshay pardeshi
Enter age: 20
Enter email: xyz@gmail.com
Enter phone: 8697354789
Data saved successfully
Press any key to continue1
----------------------------------------
 Welcome to Student Management System
----------------------------------------
1. Add New Student
2. View Students
3. Search Student
4. Update Student
5. Delete Student
6. Quit
Enter your choice: 1
-------------------------
Add Student Information
-------------------------
Enter roll: f
Enter name: e
Enter age: e
Enter email: d
```

```
Enter phone: w
Data saved successfully
Press any key to continue2
----------------------------------------
 Welcome to Student Management System
----------------------------------------
1. Add New Student
2. View Students
3. Search Student
4. Update Student
5. Delete Student
6. Quit
Enter your choice: 4
--- Update Student ---
Enter roll no. to update: f
Student Found: at index  3
Enter roll: 12309
Enter name: mahesh kale
Enter age: 20
Enter email: hgt@gmail.com
Enter phone: 7562449097
Press any key to continuew
----------------------------------------
 Welcome to Student Management System
----------------------------------------
1. Add New Student
2. View Students
3. Search Student
4. Update Student
5. Delete Student
6. Quit
Enter your choice: 2
--- Student Records ---
roll        |name     |age      |email       |phone    |
----------------------------------------------------------------------
13354       |kaushal taware         |20          |abc@gmail.com   |2738593719          |


13354       |kaushal taware         |20          |abc@gmail.com   |2847361919          |


13262       |akshay pardeshi        |20          |xyz@gmail.com   |8697354789          |


12309       |mahesh kale     |20       |hgt@gmail.com   |7562449097          |


Press any key to continuer
----------------------------------------
 Welcome to Student Management System
----------------------------------------
1. Add New Student
2. View Students
```

```
            3. Search Student
            4. Update Student
            5. Delete Student
            6. Quit
            Enter your choice: 6
            -------------------------------
             Thank you for using our system
            -------------------------------
```

In [ ]: | 1 |