

When option 1 is selected, it displays all enrolled students or error message is displayed, “**Students not enrolled in the institution**”.

```
C:\Users\Vedavyas\AppData\Local\Programs\Python\Python311\python.exe "C:\College\AP\lab-6\Venkata Muppavara
Please select an option:
    1. Display all students
    2. Display all courses
    3. Display all registrations
    4. Register student in course
    5. Search student
    6. Add student
    7. Exit
Enter option number: 1
Students not enrolled in the institution
Please select an option:
```

When option 1 is selected, all enrolled students are displayed in tabular format

```
    6. Add student
    7. Exit
Enter option number: 1
List of enrolled students:
                                Venkata Narasimha Vedavyas Muppavarapu
                                N01583267
*****
Student ID      First Name      Last Name      Email
    N01A          John          Doe      johndoe@example.com
    N01B          Jane          Doe      janedoe@example.com
    N01C          Bob          Smith     bobsmith@example.com
    N01D          Alice        Johnson    alicejohnson@example.com
    N01E          Tom          Jones     tomjones@example.com
    N01F          Sarah        Williams   sarahwilliams@example.com
    N01G          David        Miller     davidmiller@example.com
    N01H          Emily        Davis      emilydavis@example.com
    N01I          Michael     Wilson     michaelwilson@example.com
    N01J          Grace       Brown      gracebrown@example.com
*****
Please select an option:
```

Option 2 displays the courses offered at the institution (if course list exists in the database – or an error message is displayed “**Courses not offered at the institution**”)

```
Please select an option:
  1. Display all students
  2. Display all courses
  3. Display all registrations
  4. Register student in course
  5. Search student
  6. Add student
  7. Exit
Enter option number: 2
Courses not offered at the institution
Please select an option:
  1. Display all students
  2. Display all courses
```

Option 2 displays all the courses offered at the institution:

```
  2. Display all courses
  3. Display all registrations
  4. Register student in course
  5. Search student
  6. Add student
  7. Exit
Enter option number: 2
List of courses offered:

Venkata Narasimha Vedavyas Muppavarapu
N01583267

*****
Course Code      Course Title      Course Credits
-----
CCGC5000         AP                3
CCGC5001         PM                4
CCGC5002         SDN               3
CCGC5003         VIRTUALIZATION    4
CCGC5004         OS                4
CCGC5005         DB                4
*****
```

Option 3 displays the current registration in the registration table. It displays all students enrolled in different courses over the period of different semesters. If there are no students registered in any course, then course message **“There is no student registered in any course at the institution”**

Please select an option:

1. Display all students
2. Display all courses
3. Display all registrations
4. Register student in course
5. Search student
6. Add student
7. Exit

Enter option number: 3

There are no student registrations in any courses at the institution

Please select an option:

1. Display all students

When choosing option 3, following table is displayed showing all the registrations so far:

```
C:\Users\Vedavyas\AppData\Local\Programs\Python\Python311\python.exe "C:\College\AP\lab-6\Venkata Muppavarapu.py"
Please select an option:
1. Display all students
2. Display all courses
3. Display all registrations
4. Register student in course
5. Search student
6. Add student
7. Exit
Enter option number: 3

Venkata Narasimha Vedavyas Muppavarapu
N01583267

*****
Registration ID Student ID First Name Last Name Course ID Course Title Credits Enrollment Semester
1 N01A John Doe CCGC5000 AP 3 Fall 2022
2 N01B Jane Doe CCGC5000 AP 3 Fall 2022
3 N01C Bob Smith CCGC5002 SDN 3 Spring 2023
4 N01D Alice Johnson CCGC5002 SDN 3 Spring 2023
5 N01E Tom Jones CCGC5005 DB 4 Fall 2022
6 N01F Sarah Williams CCGC5004 OS 4 Fall 2022
7 N01G David Miller CCGC5004 OS 4 Spring 2023
8 N01H Emily Davis CCGC5003 VIRTUALIZATION 4 Spring 2023
9 N01I Michael Wilson CCGC5003 VIRTUALIZATION 4 Fall 2022
*****
Please select an option:
```

Choosing option 4 allows you to register student in a course. First the conditions are checked if student is enrolled in the institution and the course is offered at the institution, then the student is enrolled in the course.

This option (option 4) result is shown below (following shows when student is not enrolled in the institution based on student ID):

```
C:\Users\Vedavyas\AppData\Local\Programs\Python\Python311\python.exe "C:\College\AP\lab-6\Venkata Muppavarapu.py"
Please select an option:
1. Display all students
2. Display all courses
3. Display all registrations
4. Register student in course
5. Search student
6. Add student
7. Exit
Enter option number: 4
Enter the Student ID: N000
Enter the Course ID: CCGC5006
Enter enrollment semester: Fall 2022
Student with student ID N000 does not exist - cannot register
Please select an option:
```

When choosing option 4, if both the student as well as the course exist, then student is enrolled in the course. This is shown below:

```
Please select an option:
  1. Display all students
  2. Display all courses
  3. Display all registrations
  4. Register student in course
  5. Search student
  6. Add student
  7. Exit
Enter option number: 4
Enter the Student ID: N01I
Enter the Course ID: CCGC5004
Enter enrollment semester: Winter 23
Student with student ID N01I exists.....
Student with ID N01I and course with ID CCGC5004 both exists....
Student with student ID N01I successfully registered in course CCGC5004
Please select an option:
```

When choosing option 5, a student can be searched in the institution. Following scenario shows that when option 5 was selected and student did not exist, the message to that effect is displayed:

```
Please select an option:
  1. Display all students
  2. Display all courses
  3. Display all registrations
  4. Register student in course
  5. Search student
  6. Add student
  7. Exit
Enter option number: 5
Enter student ID: N0000
Student with that ID is not enrolled in the institution
Please select an option:
  1. Display all students
```

In another scenario, when student is already enrolled in the institution, the application (when choosing option 5) displays following:

```
Please select an option:
  1. Display all students
  2. Display all courses
  3. Display all registrations
  4. Register student in course
  5. Search student
  6. Add student
  7. Exit
Enter option number: 5
Enter student ID: N01G
```

Venkata Narasimha Vedavyas Muppavarapu

N01583267

Registration ID	Student ID	Course ID	Enrollment Semester
7	N01G	CCGC5004	Spring 2023

```
Please select an option:
```

Choosing option 6 allows user to add new student in the institution – if the student is NOT already enrolled based on the student ID.

Following scenario shows that when choosing option 6, and student already exists in the institution, displays the following:

```
Please select an option:
  1. Display all students
  2. Display all courses
  3. Display all registrations
  4. Register student in course
  5. Search student
  6. Add student
  7. Exit
Enter option number: 6
Enter student ID: N01G
Student exists in the data.
Please select an option:
```

When choosing option 6, and student is not already in the system, then following message is displayed:

```
C:\Users\Vedavyas\AppData\Local\Programs\Python\Python311\python
Please select an option:
  1. Display all students
  2. Display all courses
  3. Display all registrations
  4. Register student in course
  5. Search student
  6. Add student
  7. Exit
Enter option number: 6
Enter student ID: N0123
Student not exists in the data.
Enter first name: Vedavyas
Enter last name: MVN
Enter email: vdvs99@gmail.com
New student added.
```

Invalid option and exiting

```
Please select an option:
  1. Display all students
  2. Display all courses
  3. Display all registrations
  4. Register student in course
  5. Search student
  6. Add student
  7. Exit
Enter option number: q
Invalid option
Please select an option:
  1. Display all students
  2. Display all courses
  3. Display all registrations
  4. Register student in course
  5. Search student
  6. Add student
  7. Exit
Enter option number: 7
Exiting

Process finished with exit code 0
```