

Carpe diem 24

Create a Python program that simulates a college sports event registration system. Below are the specifications and requirements for the program:

Program Specifications:

1. Student Class:

Implement a Student class with attributes for student information, including name, roll number, enrollment number, branch, email, contact number, and a list to store registered events.

Include methods `display_details` and `display_registered_events` to print student details and registered events, respectively.

2. EventSelection Class:

Implement an EventSelection class that handles the process of selecting events for a student.

Include attributes for group events (Cricket, Football, Basketball, Volleyball), individual events (Sprint Race, Table Tennis), and a maximum limit of 2 group events per student.

Implement a method `select_event` that allows a student to register for events, considering the specified constraints.

3. Menu-Driven Interaction:

Write a main program loop that presents a menu to the user.

The menu should include options to:

Register a new student.

Register for events.

Search by enrollment number.

Exit the program.

4. Event Registration:

When a student registers for events, ensure that the program enforces the maximum limit of 2 group events per student.

Display appropriate messages for successful registrations and errors.

5. Search Functionality:

Implement a search functionality by enrollment number.

If a student is found, display their details and registered events. If not found, print a suitable message.

Instructions:

- Your Python code should be well-structured and adhere to best practices.
- Provide comments or explanations for critical sections of your code.
- Consider error handling and provide informative messages for the user.
- Assume that user input is valid, and there's no need for extensive input validation.

Expected Outcome:

Menu:

1. Register a new student
2. Register for events
3. Search by Enrollment No
4. Exit

Enter your choice (1-4): 1

Enter student name: Parth

Enter roll number: 1

Enter enrollment number: 22002171210001

Enter branch: CSE

Enter email: parth@ljku.edu.in

Enter contact number: 1234567890

Student Details:

Name: Parth

Roll No: 1

Enrollment No: 22002171210001

Branch: CSE

Email: parth@ljku.edu.in

Contact No: 1234567890

Menu:

1. Register a new student
2. Register for events
3. Search by Enrollment No
4. Exit

Enter your choice (1-4): 3

Enter enrollment number to search: 22002171210001

Student Details:

Name: Parth

Roll No: 1

Enrollment No: 22002171210001

Branch: CSE

Email: parth@ljku.edu.in

Contact No: 1234567890

Parth (22002171210001) has not registered for any events.

Menu:

1. Register a new student
2. Register for events
3. Search by Enrollment No
4. Exit

Enter your choice (1-4): 2

Enter enrollment number to register for events: 22002171210001

Available Events:

Group Events:

- Cricket
- Football
- Basketball
- Volleyball

Individual Events:

- Sprint Race
- Table Tennis

Enter an event to select (or 'done' to finish): Cricket

Cricket selected successfully!

Enter an event to select (or 'done' to finish): Football

Football selected successfully!

Enter an event to select (or 'done' to finish): Basketball

Error: Maximum limit of 2 group events reached.

Enter an event to select (or 'done' to finish): Table Tennis

Table Tennis selected successfully!

Enter an event to select (or 'done' to finish): done

Registered Events for Parth (22002171210001):

- Cricket
- Football
- Table Tennis

Menu:

1. Register a new student
2. Register for events
3. Search by Enrollment No
4. Exit

Enter your choice (1-4): 3

Enter enrollment number to search: 22002171210001

Student Details:

Name: Parth

Roll No: 1

Enrollment No: 22002171210001

Branch: CSE

Email: parth@ljku.edu.in

Contact No: 1234567890

Registered Events for Parth (22002171210001):

- Cricket
- Football
- Table Tennis

Menu:

1. Register a new student
2. Register for events
3. Search by Enrollment No
4. Exit

Enter your choice (1-4): 4

Exiting the program.