

# Academic Record Management System

The academic record office currently manages student scores using a spreadsheet. This manual process can be time-consuming and prone to errors. Your task is to design and implement an object-oriented application in Python to improve the efficiency and accuracy of score management.

## Requirements:

- **Classes:**
  - Identify and define relevant classes from the provided score sheet, such as Student, Course, and Score.
  - Encapsulate data and functionalities within each class.
  - Consider using inheritance and composition as needed.
  - Strive for code reusability, flexibility, and extensibility.
  - Adhere to object-oriented principles like abstraction and encapsulation.
- **Functionalities:**
  - Develop a user-friendly menu
  - Allow record staff to perform the following tasks:
    - Add new students and courses.
    - Enter student scores for different courses.
    - View all students and their scores.
    - Calculate and display statistics:
      - Highest score in a specific course for all students.
      - Average score in a specific course for all students.
      - Any other relevant statistics as deemed useful.
  - Feel free to use additional functionalities as enhancements.
- **Deliverables:**
  - Create the following diagrams using "drawio" tool:
    - UML Class Diagram: Visually represent the classes, their attributes, methods, and relationships.
    - Use Case Diagram: Depict the interaction between the user and the system, highlighting the use cases provided.

| Student ID | Student Name | Program Name         | CS101<br>(Introduction to Computer Science) - Prof. Smith | BIO202<br>(Biology II) - Prof. Jones | ENG303<br>(Advanced English) - Prof. Brown | HIS404<br>(World History) - Prof. Miller | MAT105<br>(Calculus I) - Prof. Lee |
|------------|--------------|----------------------|---|--------------------------------------|--|--|------------------------------------|
| 12345      | John Smith   | Data Science         | [85, 90, 78]  | [92, 88, 95, 80]                     | [78, 85, 82]                               | [95, 98, 90]                             | [68, 72, 80]                       |
| 54321      | Jane Doe     | Computer Engineering | [85, 90, 78]  | [88, 92, 85, 75]                     | [78, 85, 82]                               | [90, 95, 98]                             | [68, 72, 80]                       |
| 67890      | Michael Lee  | Software Engineering | [85, 90, 78]  | [95, 92, 88, 82]                     | [78, 85, 82]                               | [85, 90, 95]                             | [68, 72, 80]                       |
| 21098      | Sarah Jones  | Cybersecurity        | [85, 90, 78]  | [82, 88, 92, 78]                     | [78, 85, 82]                               | [98, 90, 95]                             | [68, 72, 80]                       |
| 78901      | David Miller | Software Engineering | [85, 90, 78]  | [90, 95, 88, 85]                     | [78, 85, 82]                               | [92, 85, 90]                             | [68, 72, 80]                       |