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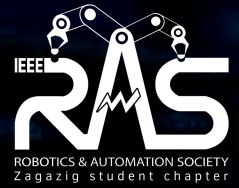IEEE.ZSB.ROS
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TEAM_F

ROS
PROJECT_1

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- *Omar*
- *Omar*
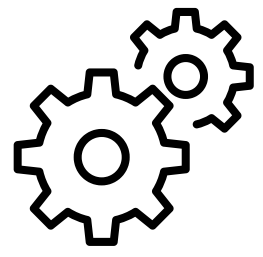- *Rowida*

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Overview about project:

This project will be implemented using Object-Oriented Programming (OOP) principles. We will create multiple classes for representing entities such as Student, Professor, Course, College, and Department. Each class will contain methods that define the operations related to each entity. The system will be implemented in Python, with data stored in a simple file-based format (JSON) to persist data across sessions.

System :

Main Functions:

register_student(): Registers a new student and adds them to the system. register_course_for_student(): Registers courses for the student.

mark_attendance(): Marks attendance for students in each course.

assign_grade(): Assigns grades to students. calculate_gpa(): Calculates GPA based on registered courses and grades.

Main code files:

```
student.py        # Student class
professor.py      # Professor class
course.py         # Course class
college.py        # College class
registration.py   # Registration functions
attendance.py     # Attendance functions
grading.py        # Grading functions
data.json         # Persistent data storage
config.py         # Configuration settings
```

- Data Persistence: JSON file storage for all system data
- CLI Interface: Menu-driven interface for students, professors, and admin

Structure :

MAIN():

- **Student :**
  - Register Student () :
  - Register Courses () :
  - Attendance () :
  - Grades () :
  - GPA Calculation () :

- **Professor :**

  - Assign Grades () :
  - Mark Attendance () :
  - Manage Courses () :
    - Course Name
    - Credits
    - Department
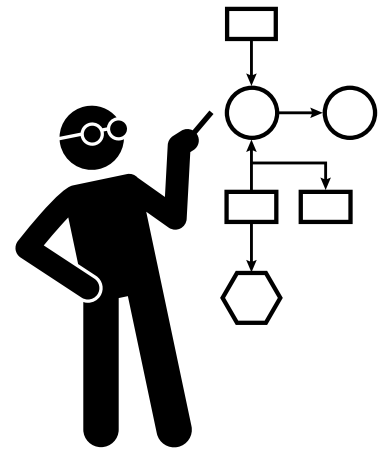 - Assign To Courses () :

- **Admin :**

  - Assign Professors To Courses () :
  - Student () :   *Add & Remove*
  - Professors () : *Add & Remove*
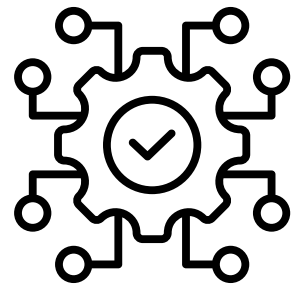 - Courses () :   *Add & Remove*

- **End :**

  - If (MM) ---> Back to Main Menu

- **Json File :**

  - Initial Data
  - Call @start & Save @End
  - Write & Read

Functionality :

Students will be able to register for courses based on their college and level, and they will be able to track attendance and grades.

Professors will be able to Assign Grades, Mark Attendance, Manage Courses and Assign To Courses

Admins can add or remove students, professors, and courses, and assign professors to courses