**School Management System**

This project implements a basic school management system in Python. It consists of classes representing a School, ClassRoom, Subject, Teacher, and Student.

**1. School:**

- Attributes:

- name: Name of the school.

- address: Address of the school.

- teachers: Dictionary to store teachers associated with subjects.

- classrooms: Dictionary to store classrooms.

- Methods:

- add\_classroom(classroom): Adds a classroom to the school.

- add\_teacher(subject, teacher): Adds a teacher to a specific subject.

- student\_admission(student): Enrolls a student into a classroom.

- calculate\_grade(marks): Static method to calculate the grade based on marks.

- grade\_to\_value(grade): Static method to convert grade to its corresponding value.

- value\_to\_grade(value): Static method to convert value to its corresponding grade.

- \_\_repr\_\_(): String representation of the school, including classroom details and student exam marks.

2. ClassRoom:

- Attributes:

- name: Name of the classroom.

- students: List to store students.

- subjects: List to store subjects taught in the classroom.

- Methods:

- add\_student(student): Adds a student to the classroom.

- add\_subject(subject): Adds a subject to the classroom.

- take\_semester\_final(): Conducts semester final exams for all subjects.

- get\_top\_students(): Method to sort students by grade (TODO).

**3. Subject:**

- Attributes:

- name: Name of the subject.

- teacher: Teacher associated with the subject.

- max\_marks: Maximum marks for the subject.

- pass\_marks: Passing marks for the subject.

- Methods:

- exam(students): Conducts exam for students and records their marks.

**4. Person:**

- Attributes:

- name: Name of the person.

**5. Teacher (inherits from Person):**

- Attributes:

- Inherits name from Person.

- Methods:

- teach(): Placeholder method for teaching.

- evaluate\_exam(): Evaluates exams and returns random marks.

**6. Student (inherits from Person):**

- Attributes:

- Inherits name from Person.

- classroom: Classroom the student is enrolled in.

- marks: Dictionary to store marks obtained in subjects.

- subject\_grade: Dictionary to store grades obtained in subjects.

- grade: Final grade of the student.

- Methods:

- calculate\_final\_grade(): Calculates the final grade of the student.

- Properties:

- id: Getter and setter for student ID.