

# IFSC 3360: System Analysis and Design

## K-12 School System

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# Student Information Systems (SIS)

- Student Information Systems (SIS) store and track all student information, including grades, attendance records, and more. SIS is a system that can be used by teachers, students, and parents to communicate all important information pertaining to a student's schooling.
- Our plan is to upgrade the existing system. By upgrading the software by improving the Information management feature, Student portal features, and Parents portal feature.
- The school is looking upgrade on the Student and Parent portal to run faster and to debug the existing system.



# System Requirements

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Simplifies sharing of student information across department.

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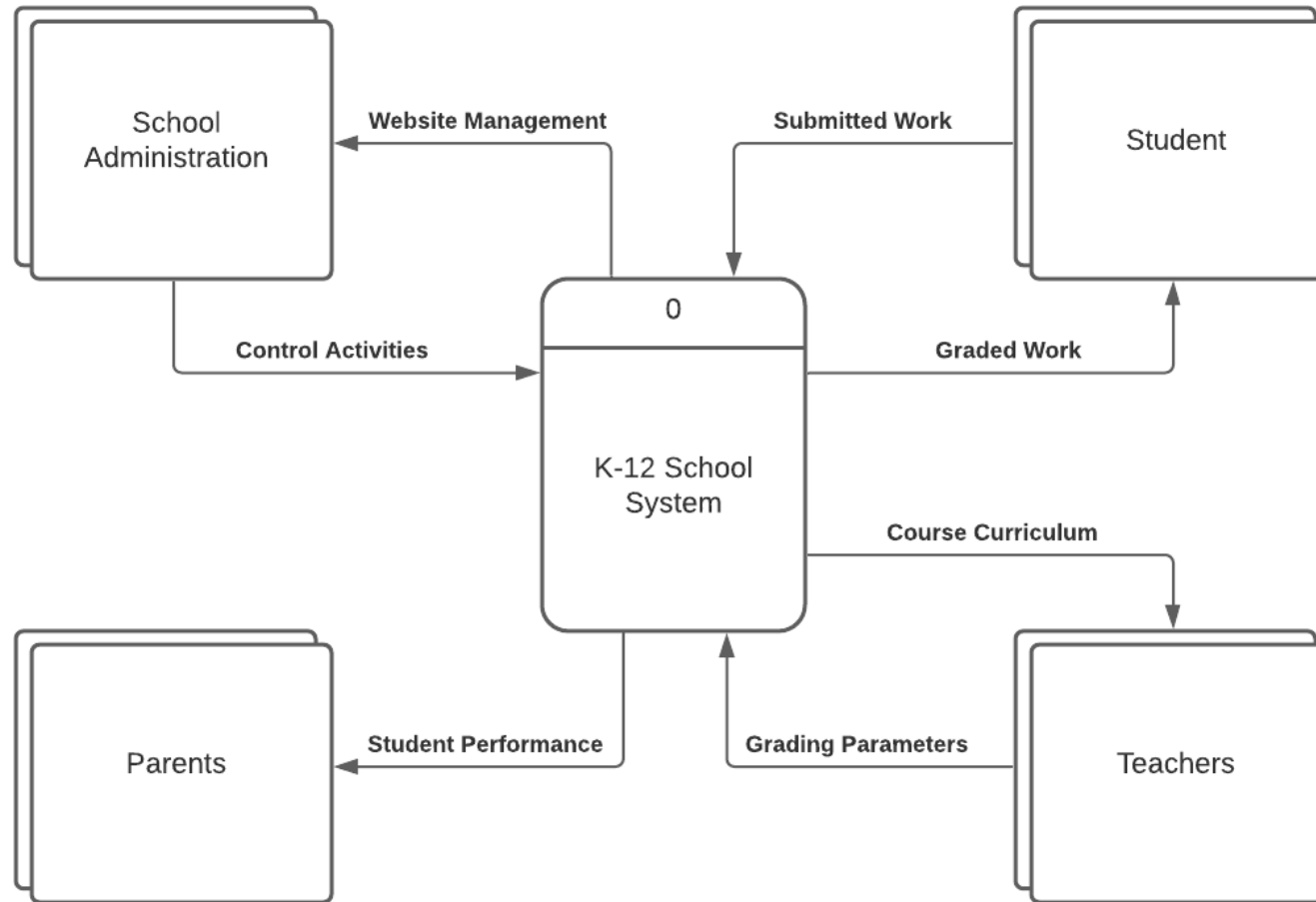
Enables greater communication between administrators, teachers, parents and students.

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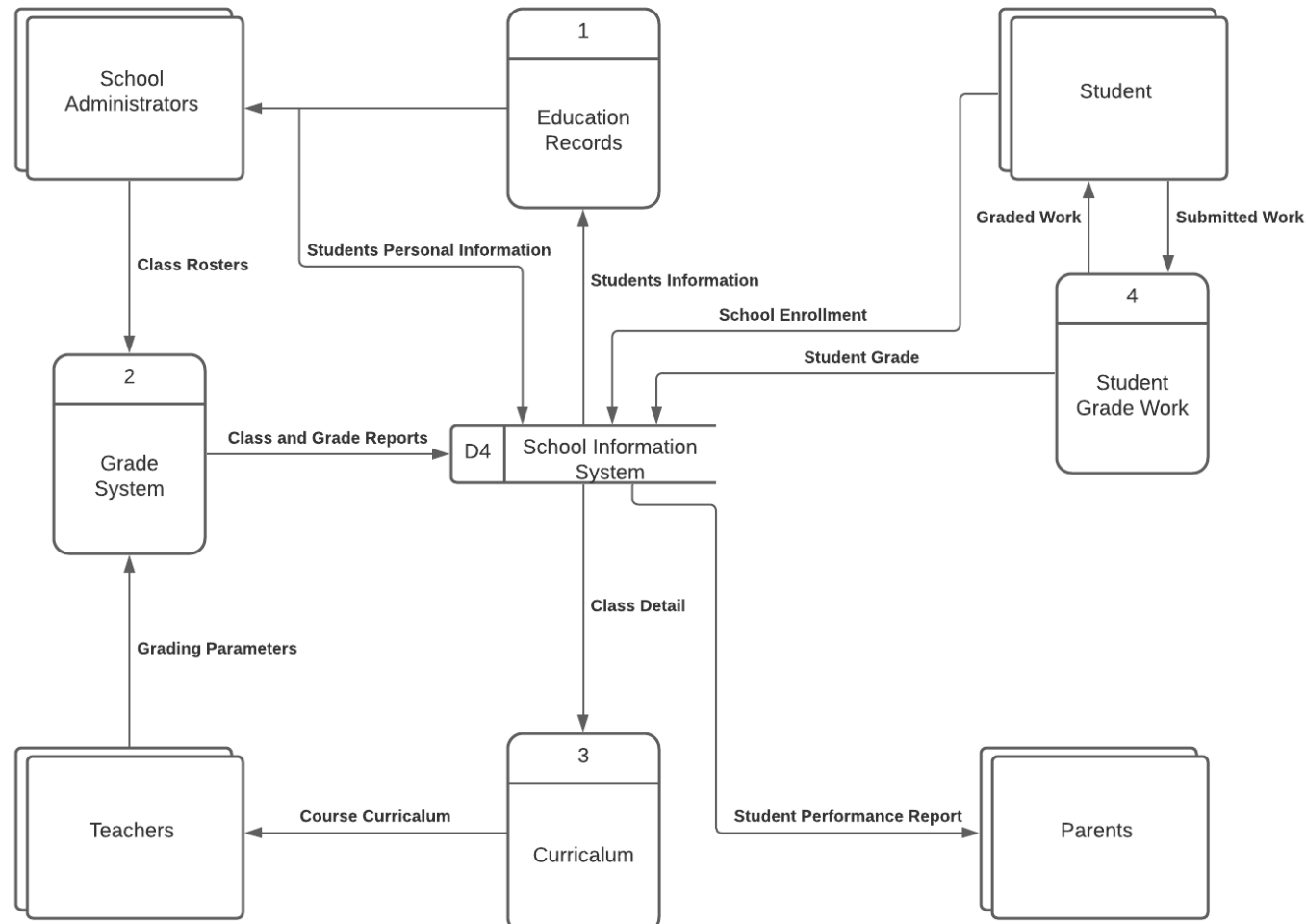
Allows school to assess students more effectively.

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Automates reporting on key school performance indicators.

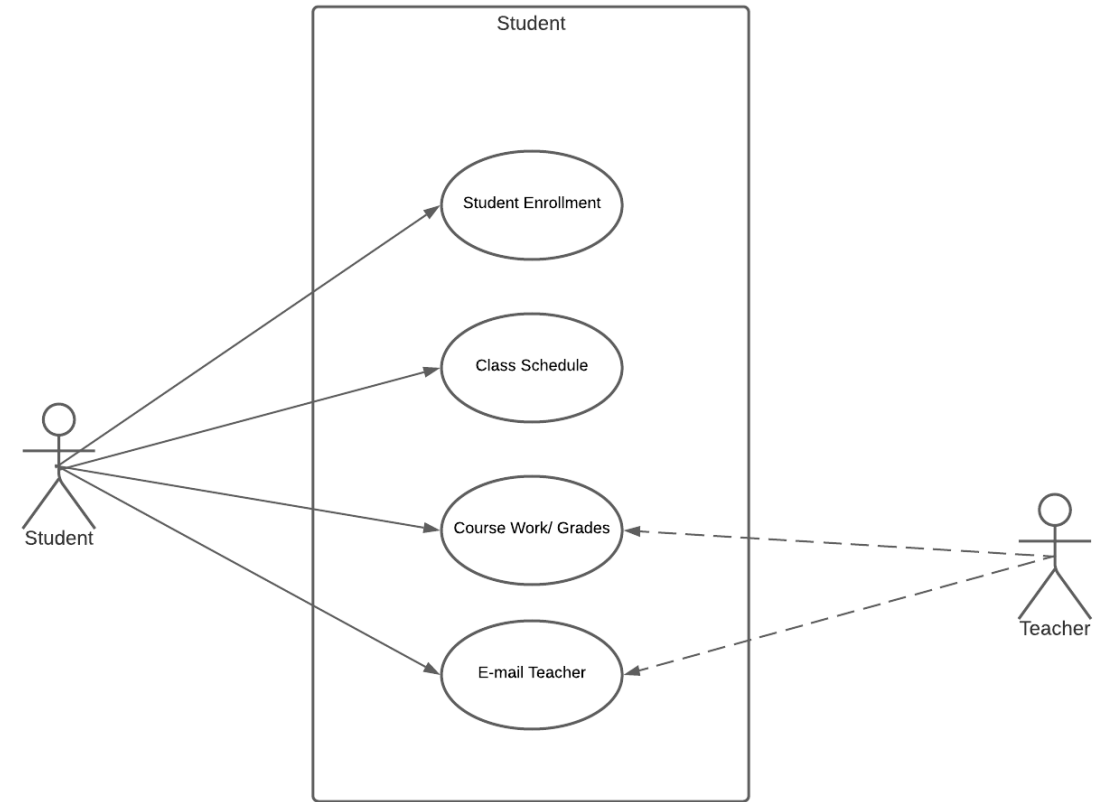


Data Flow  
Diagram of  
the school's  
SIS



Data Flow  
Diagram of  
the School's  
SIS

# Use Case Model - Student



## Student Enrollment Use Case

## Student Enrollment

**Name:** Student Enrollment

**Actor:** Student / Teacher

**Description:** Register with school administration to enroll into school.

**Successful Completion:**

1. Complete registration form.
2. Submit required documents. (Birth certificate, social security card, Immunization record)
3. Complete student information form.
4. Complete parent information form.

**Alternative:**

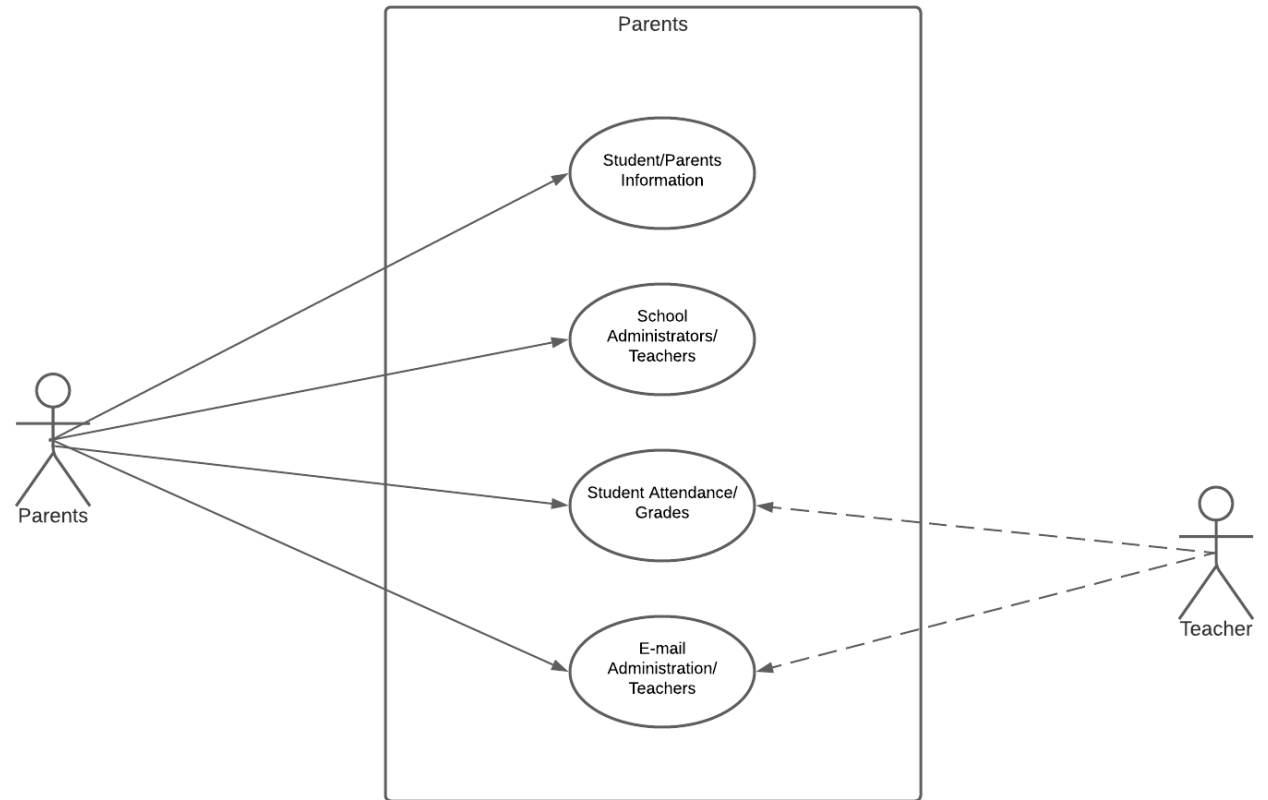
1. Other documents indicating child's age. (Passport, Previous School records, U.S. military identification)
2. Previous school report card or Transcript.

**Precondition:** None

**Postcondition:** None

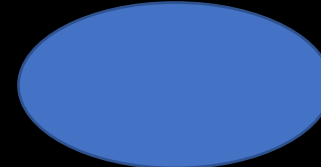
**Assumptions:** None

# Use Case Model - Parents





## Parents Use Case



Parents

**Name:** Parents

**Actor:** Parents / Teacher

**Description:** Parents involvement with school's administration and teachers.

**Successful Completion:**

1. Complete parents and student's personal information.
2. Record any required meetings with administration and teachers.
3. Record student's attendance, track course work and grades.
4. Communicate with administration and teachers.

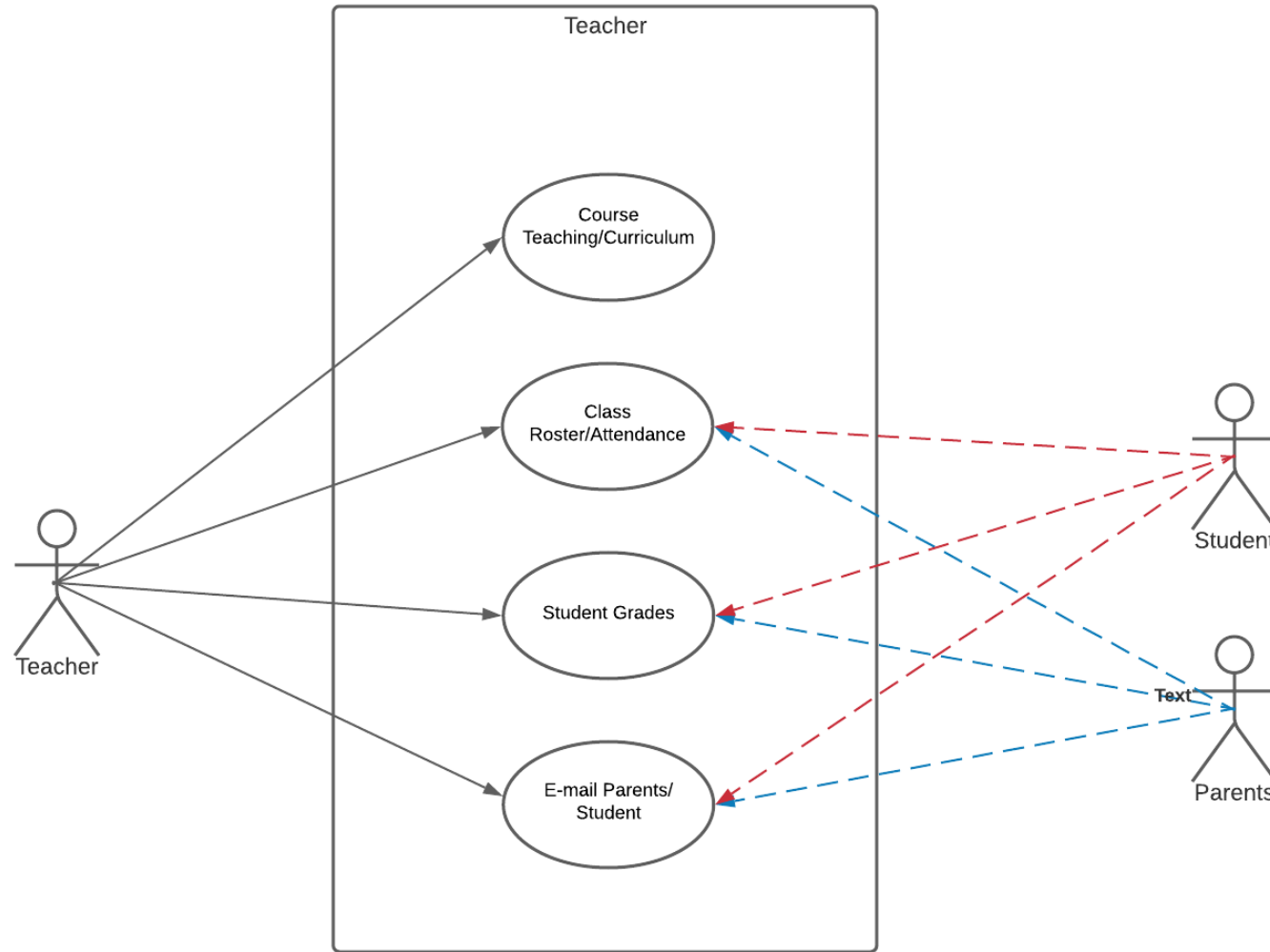
**Alternative:**

1. Monitor student's progress on a regular base.
2. Contact the school promptly with issues impeding the academic progress.

**Precondition:** None

**Postcondition:** None

**Assumptions:** None



# Use Case Model - Teacher

## Teachers Use Case

Teachers

**Name:** Teachers

**Actor:** Teachers/Parents/Students

**Description:** Teach develop curriculum and lesson plans and present those lessons to their students.

**Successful Completion:**

1. Create lesson plans for the classes that is to be taught.
2. Receive class rosters and take attendance.
3. Keep record of course work and grades.
4. Communicate with students and parents.

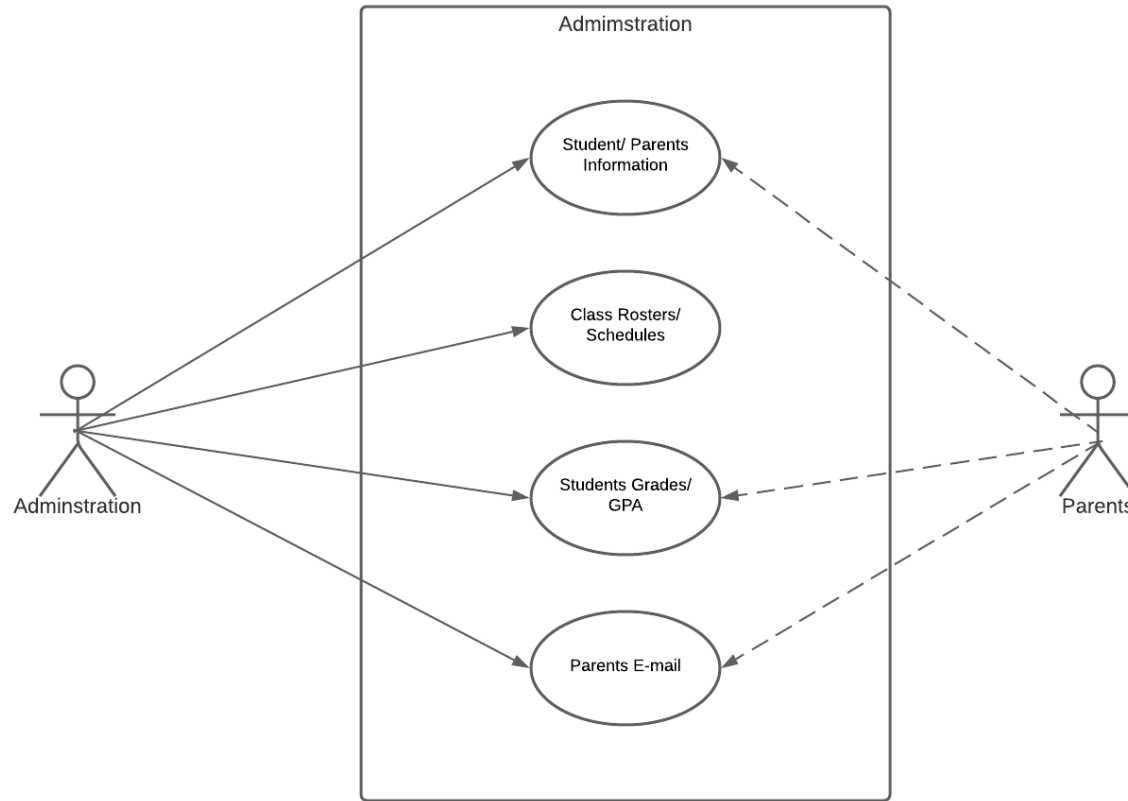
**Alternative:**

1. Monitor student's progress on a regular basis.
2. Teachers are responsible for maintaining a safe and respectful classroom environment .

**Precondition:** Be well informed in the course that is being taught.

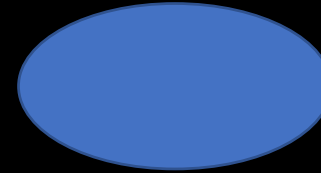
**Postcondition:** It measure progress and accomplishment of students towards their academic achievements.

**Assumptions:** None



## Use Case Model - Administration

## Administration Use Case



Administration

**Name:** Administration

**Actor:** Administration/Parents

**Description:** Maintain and control school's records.

**Successful Completion:**

1. Keep record of students and parents' information.
2. Keep record of students' classes and schedules.
3. Keep record of students' grades and GPA.
4. Communicate with parents.

**Alternative:**

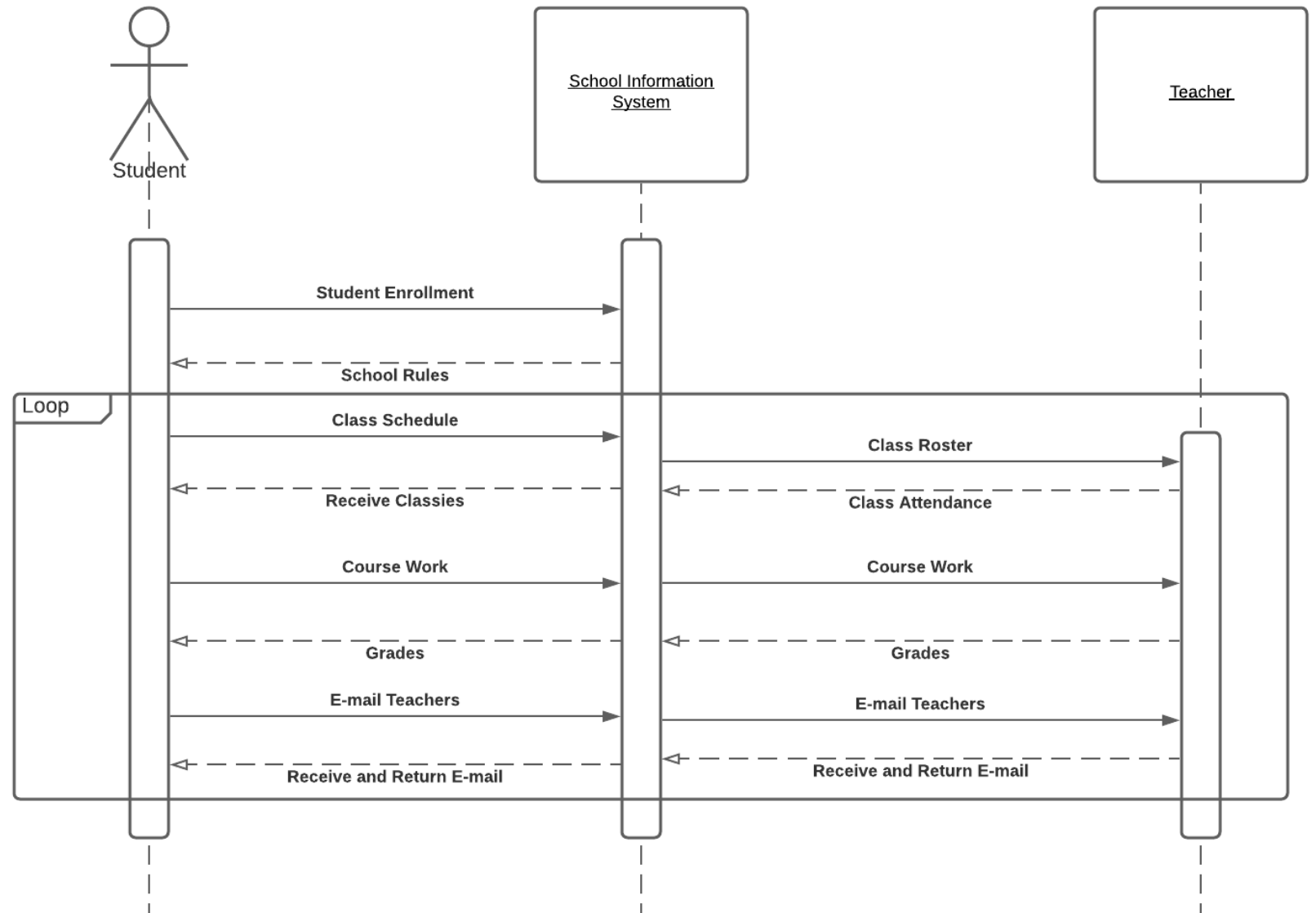
1. Keep the daily function of the school.
2. Overseeing the success of the school.

**Precondition:** None

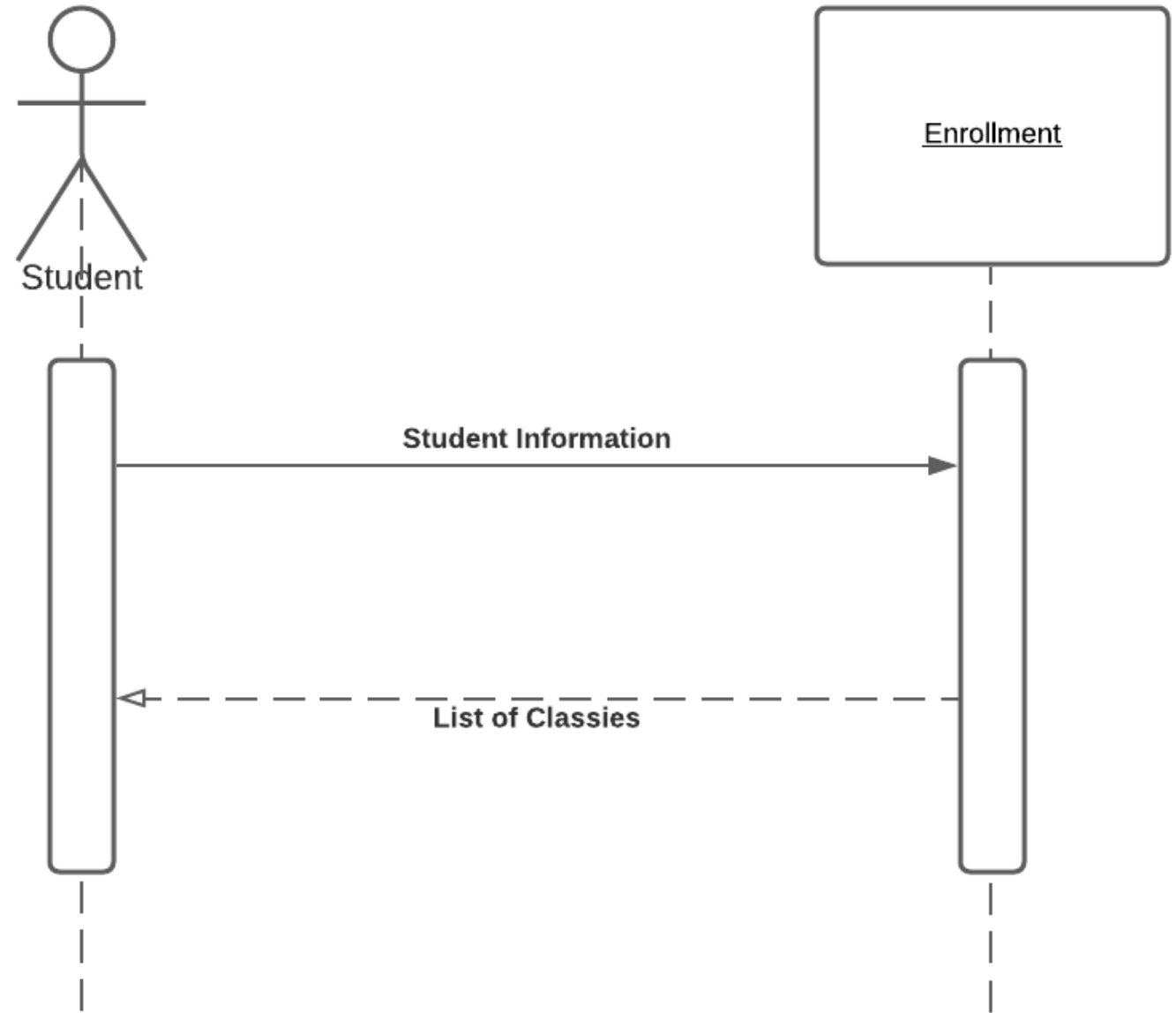
**Postcondition:** None

**Assumptions:** None

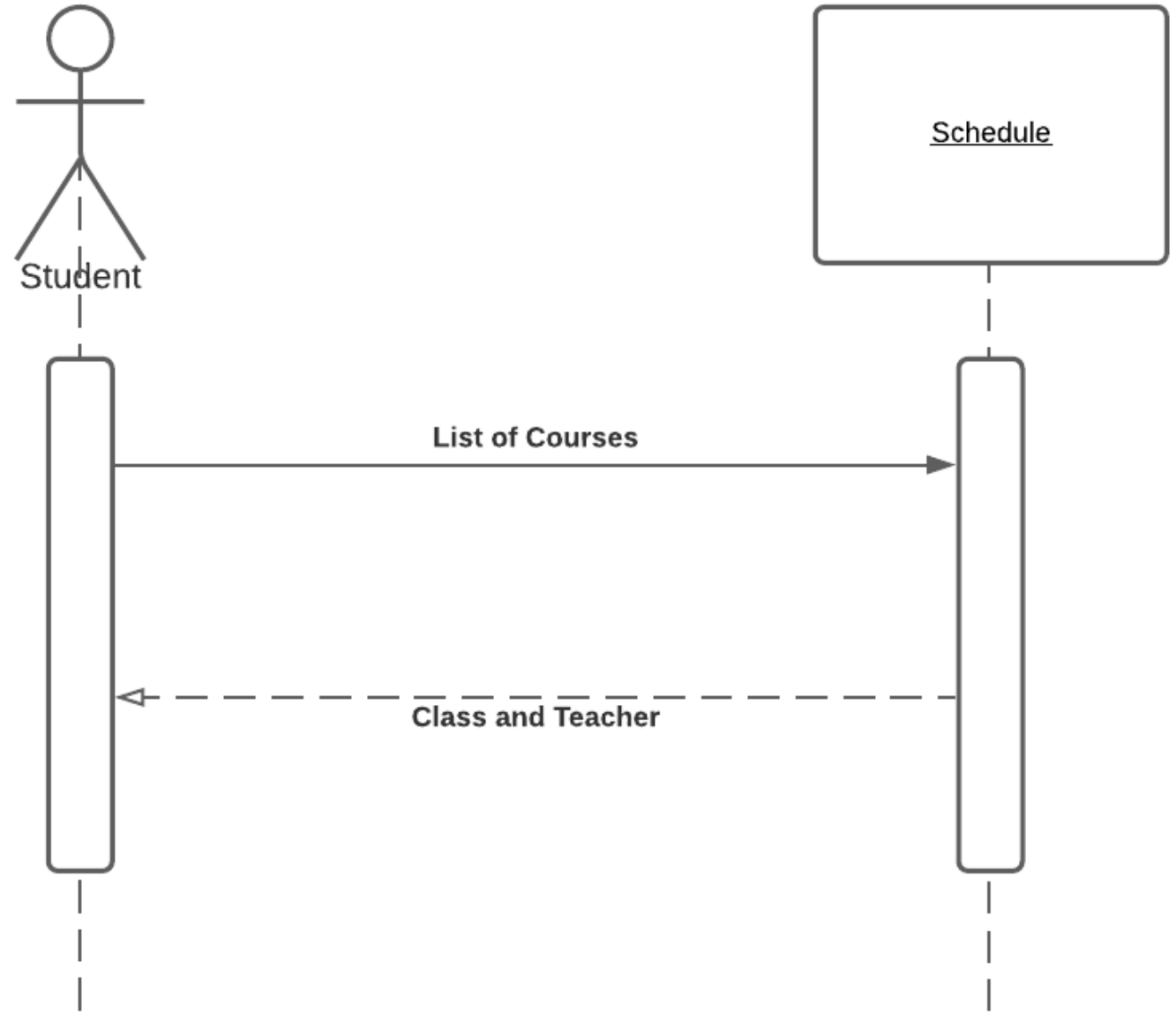
## System Sequence Diagram - Student



# Sequence Diagram – Student Enrollment

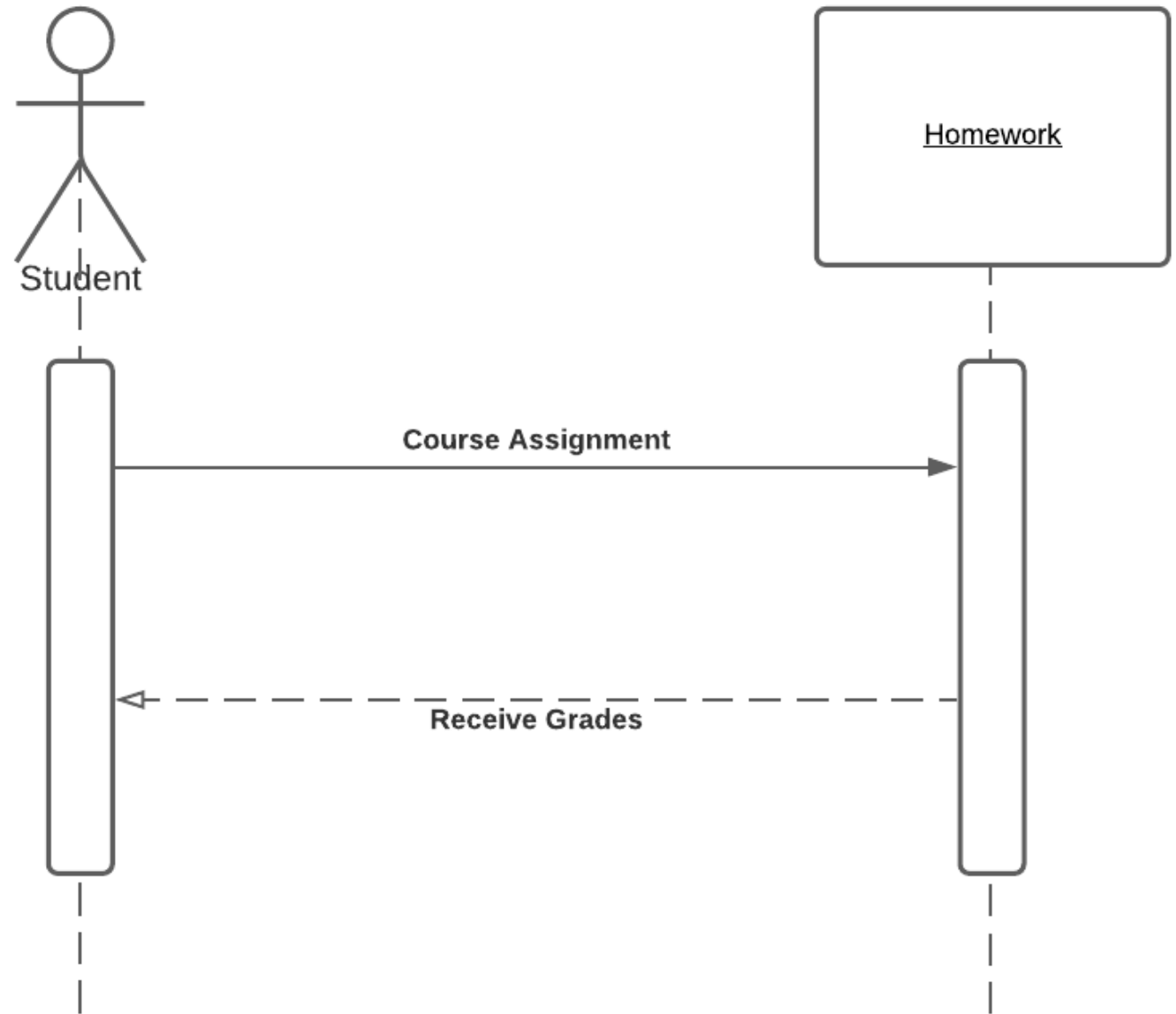


# Sequence Diagram – Class Schedule

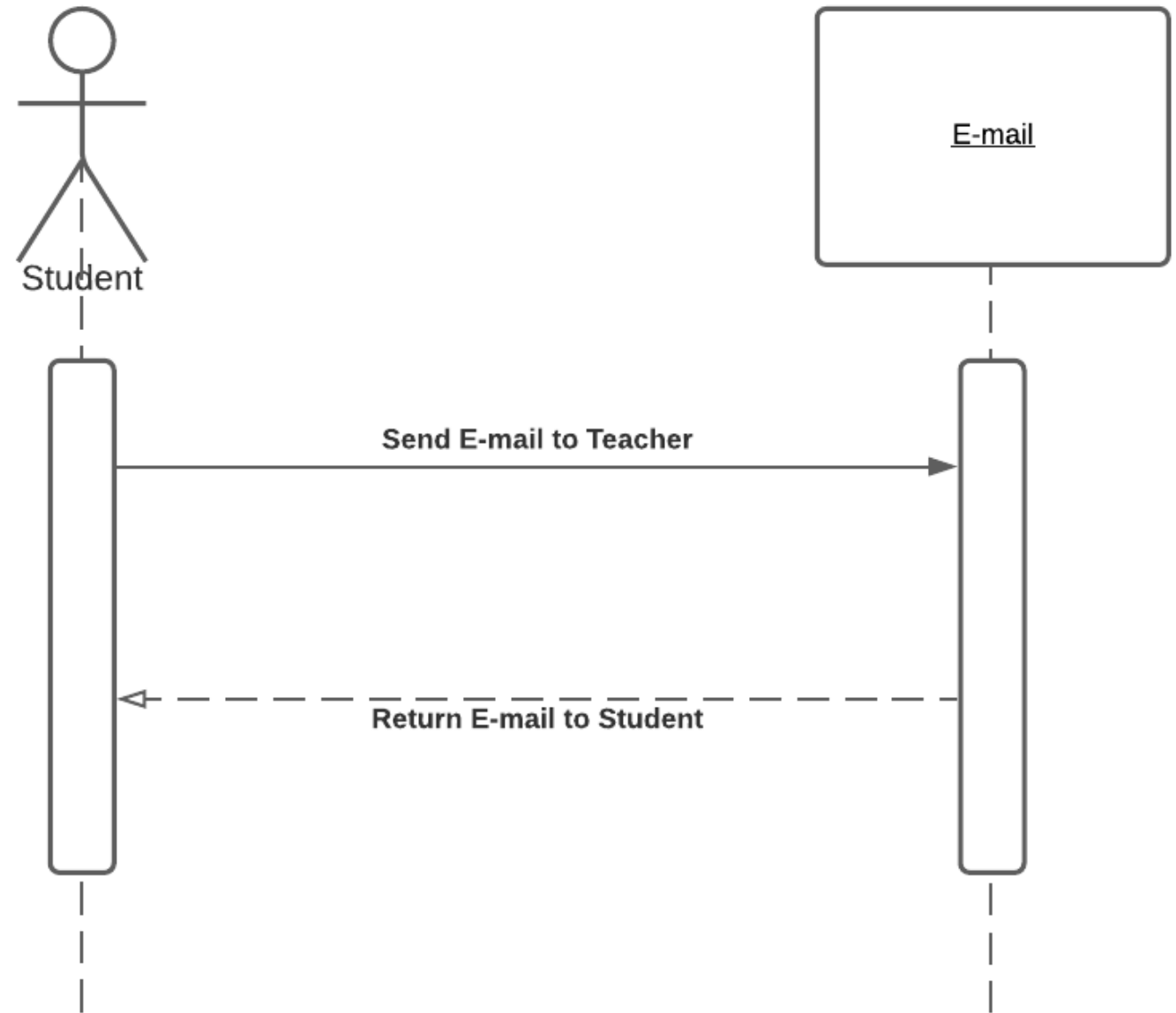




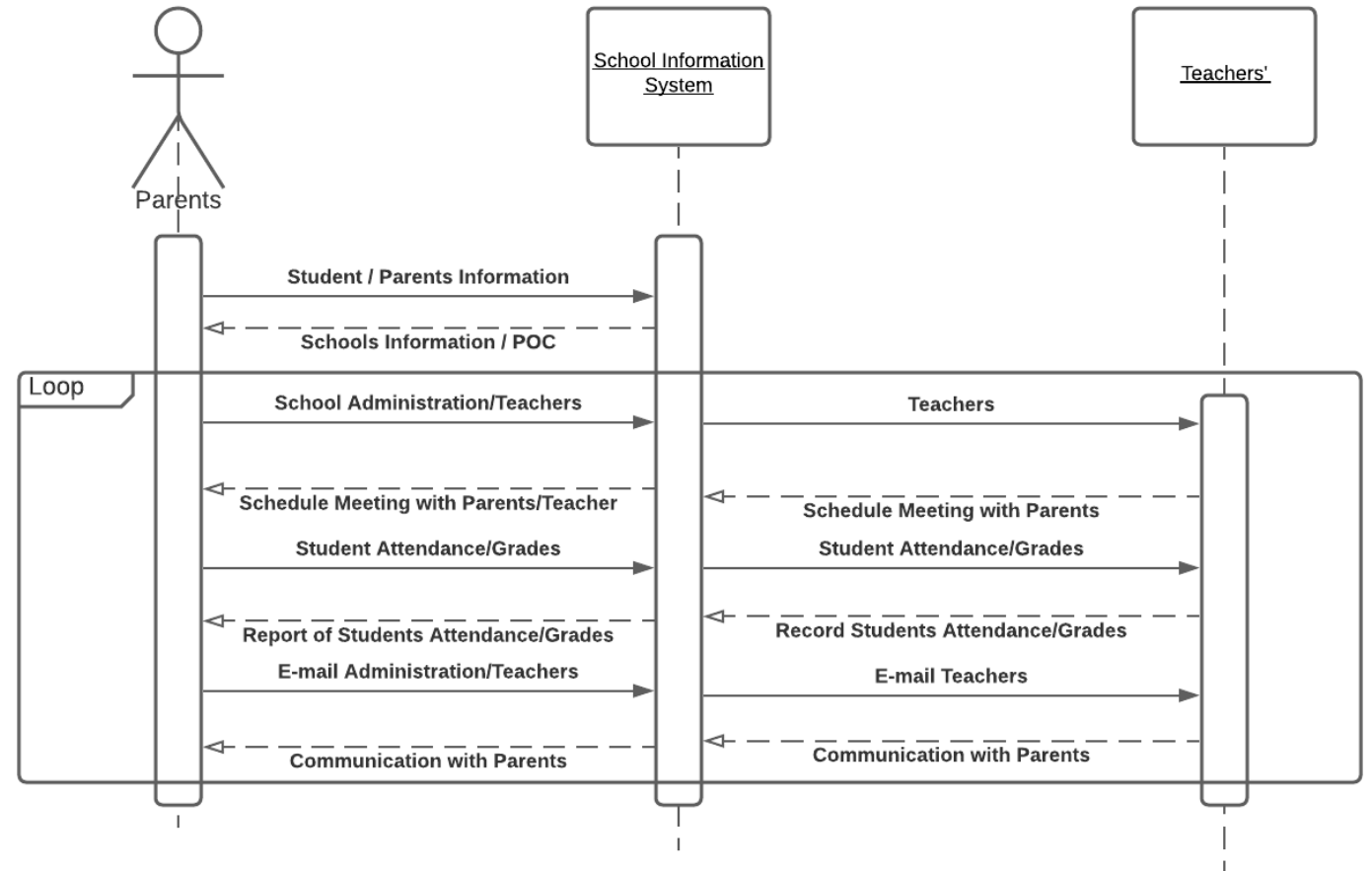
# Sequence Diagram – Course Work/Grades



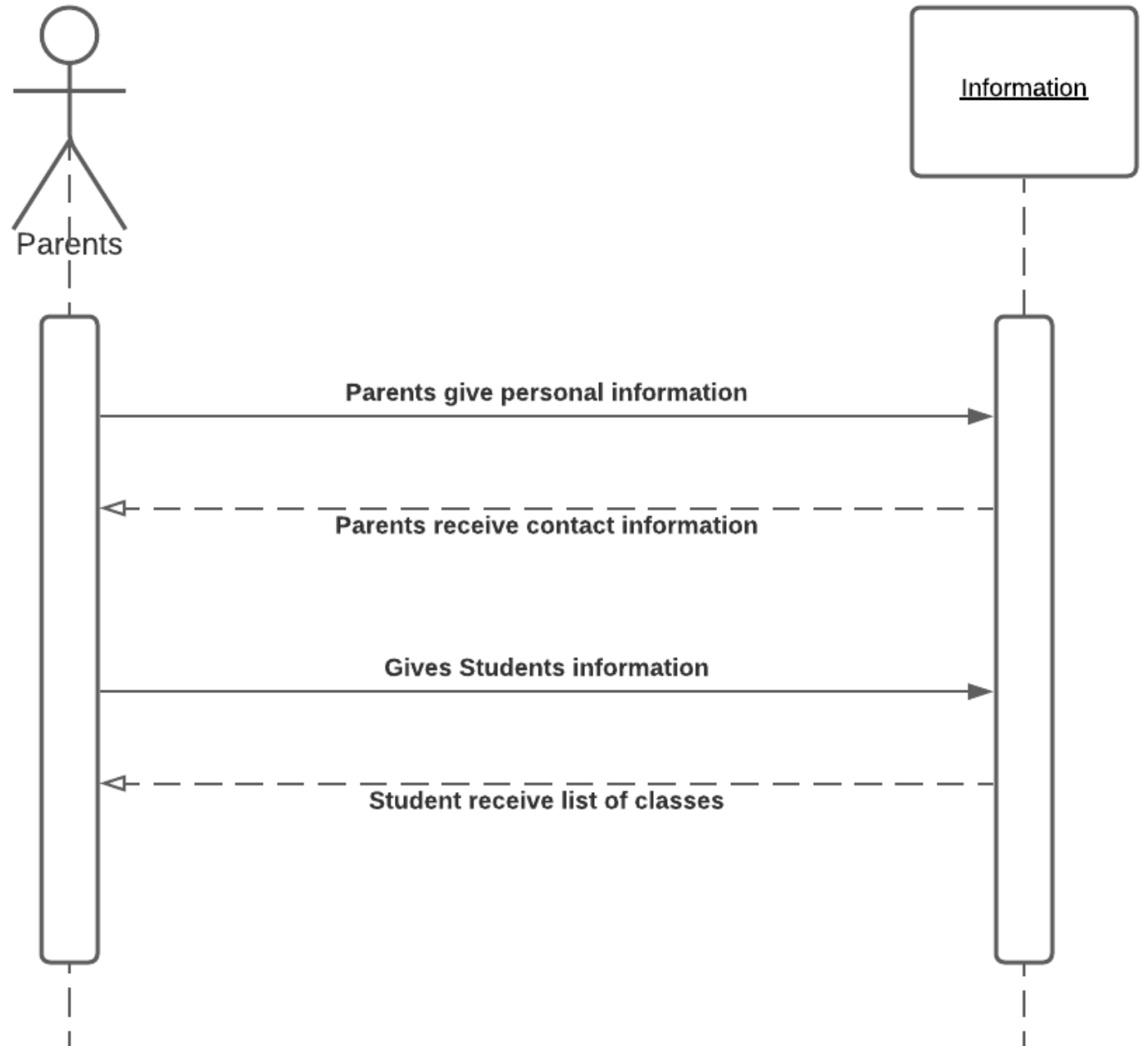
# Sequence Diagram – E-mail Teachers



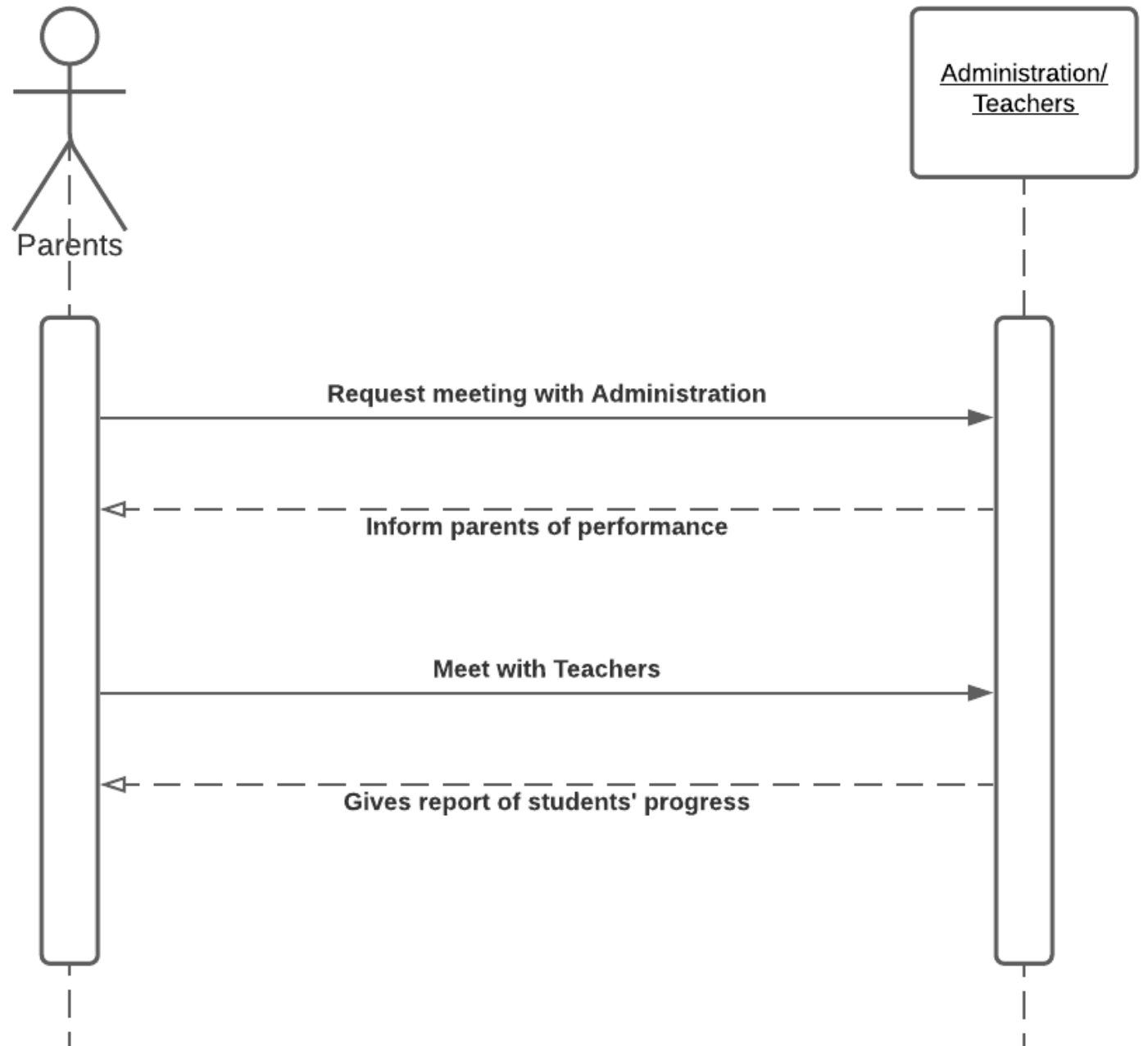
# System Sequence Diagram - Parents



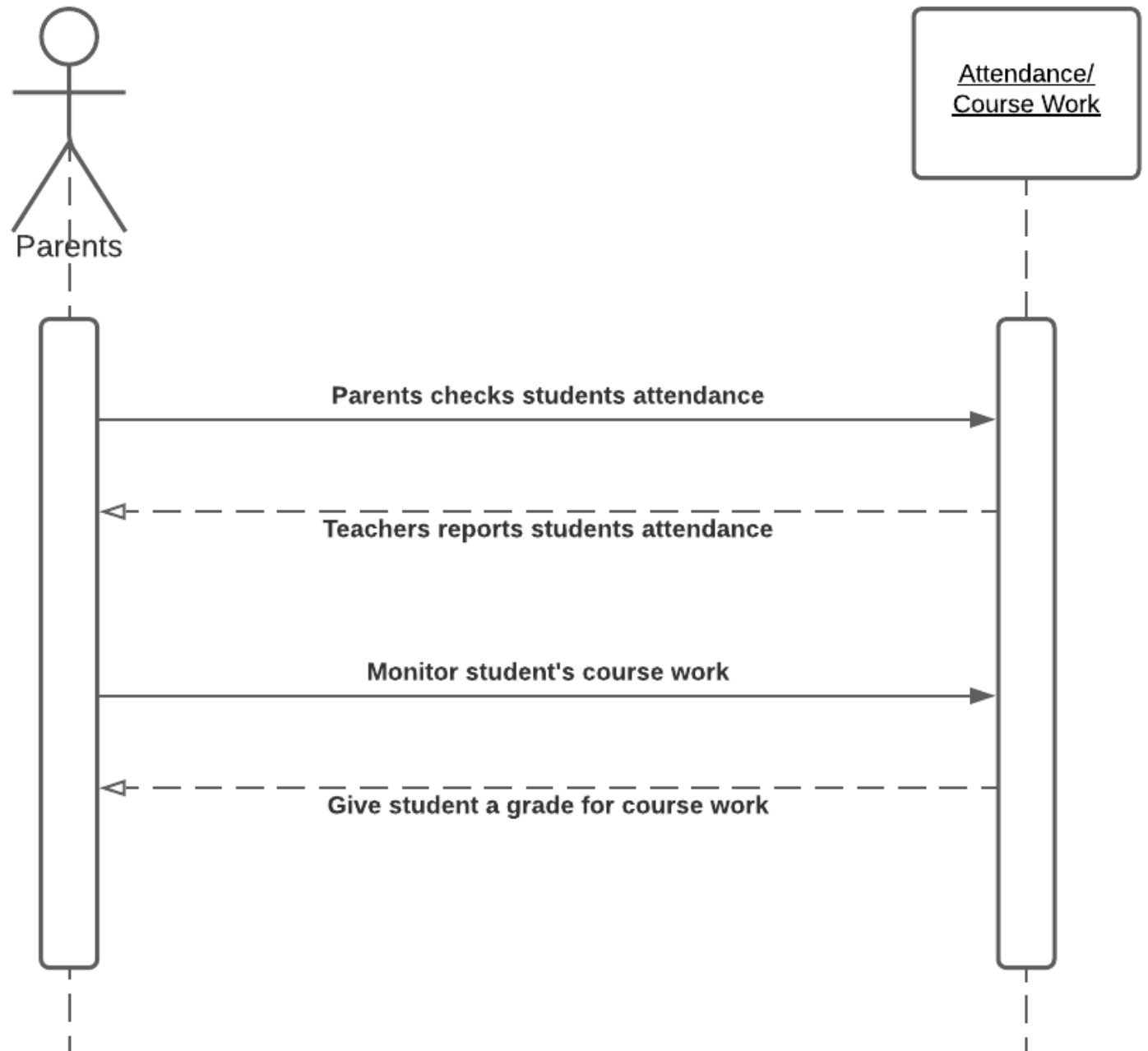
# Sequence Diagram – Student/Parents Information



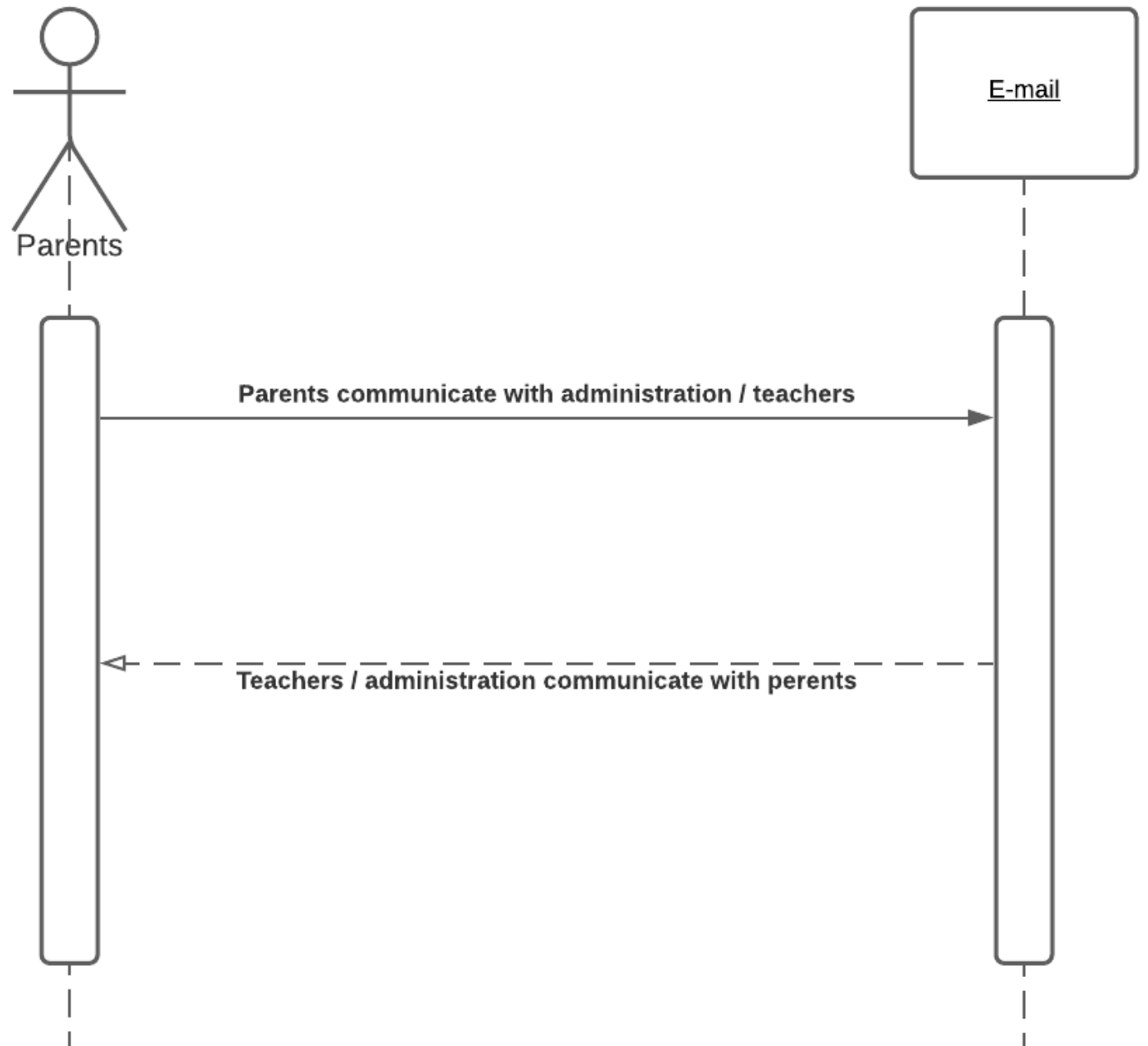
# Sequence Diagram – Administration / Teachers

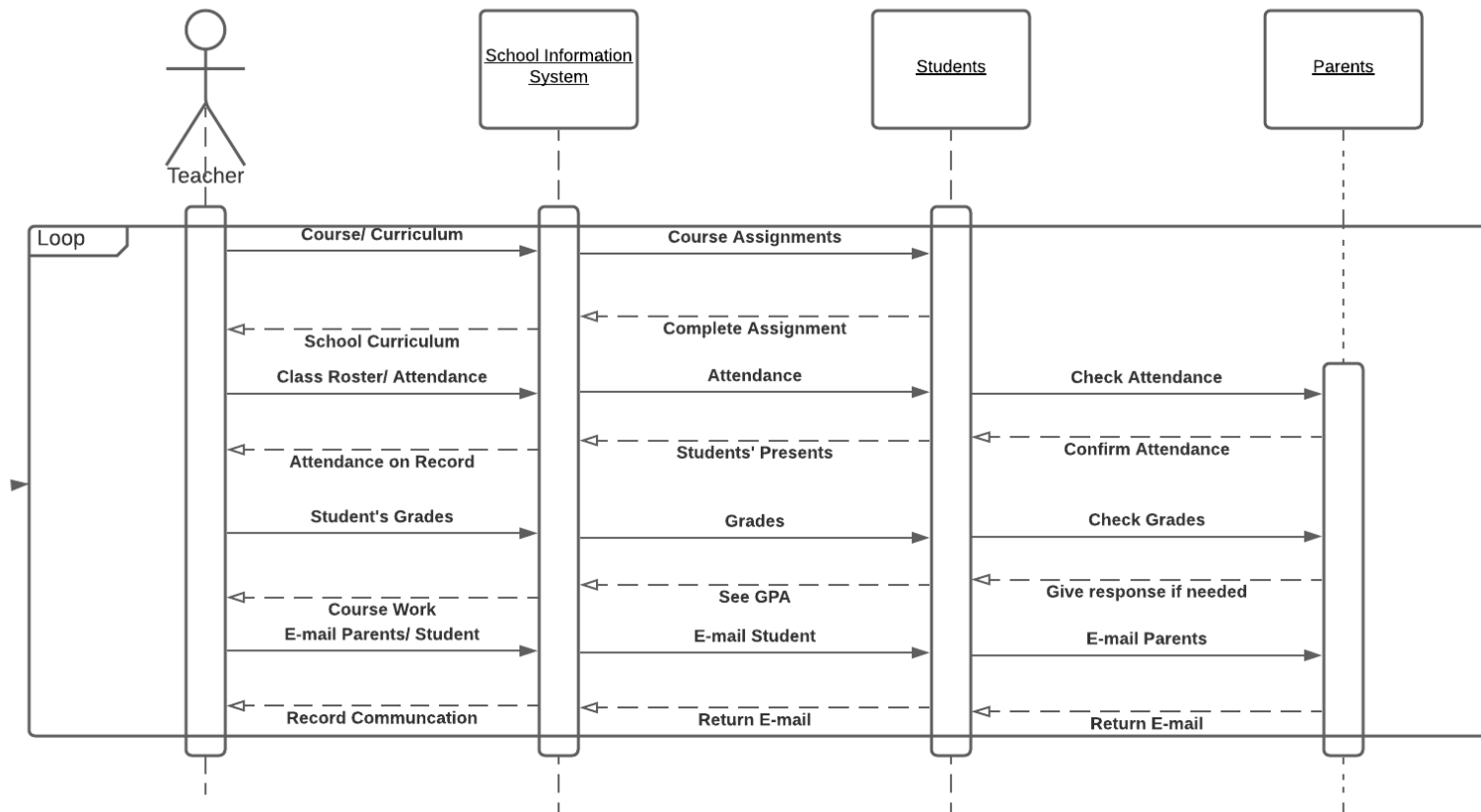


# Sequence Diagram – Students Attendance / Grades



# Sequence Diagram – E-mail Administration and Teachers

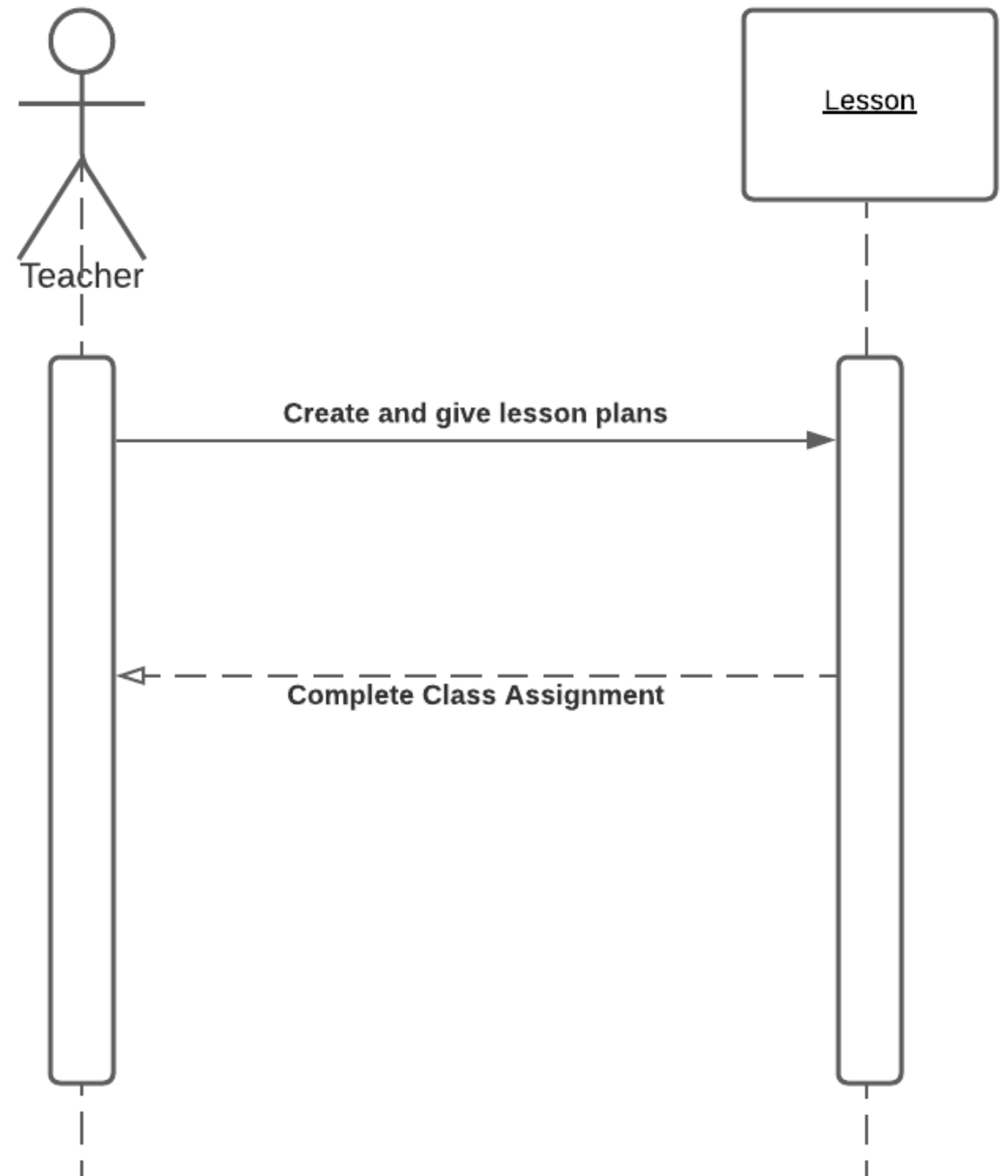




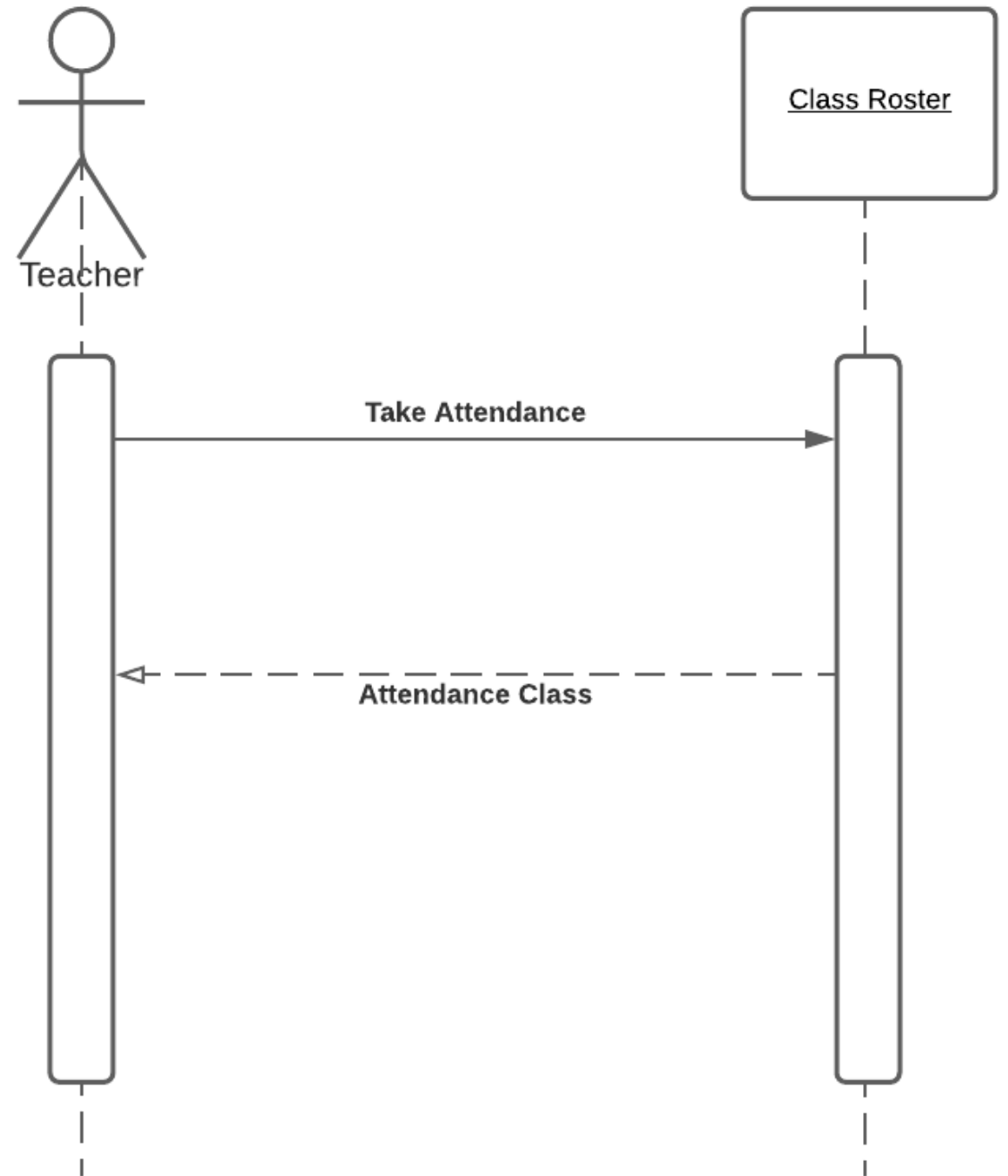
# System Sequence Diagram – Teachers



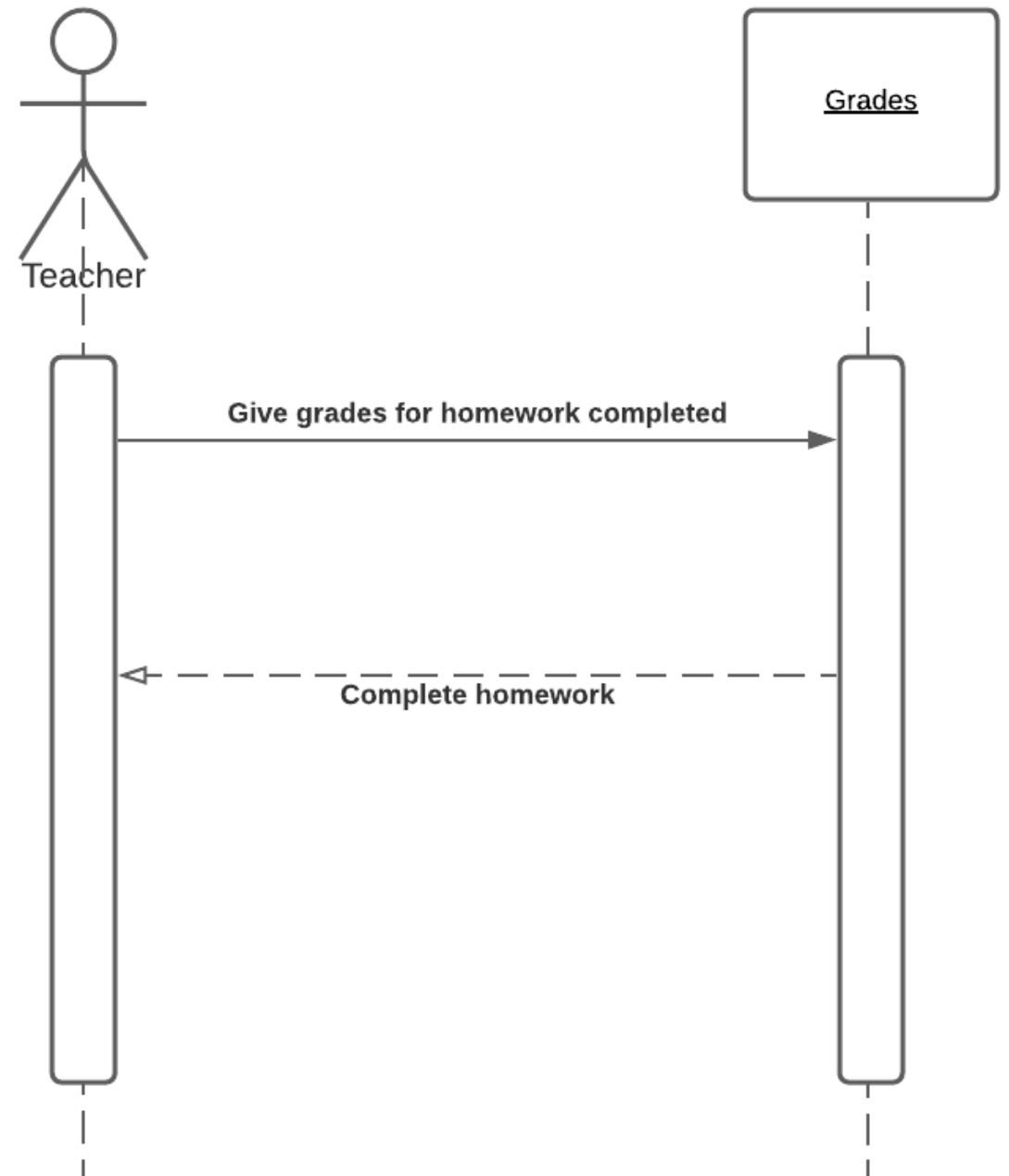
# Sequence Diagram – Course and Curriculum



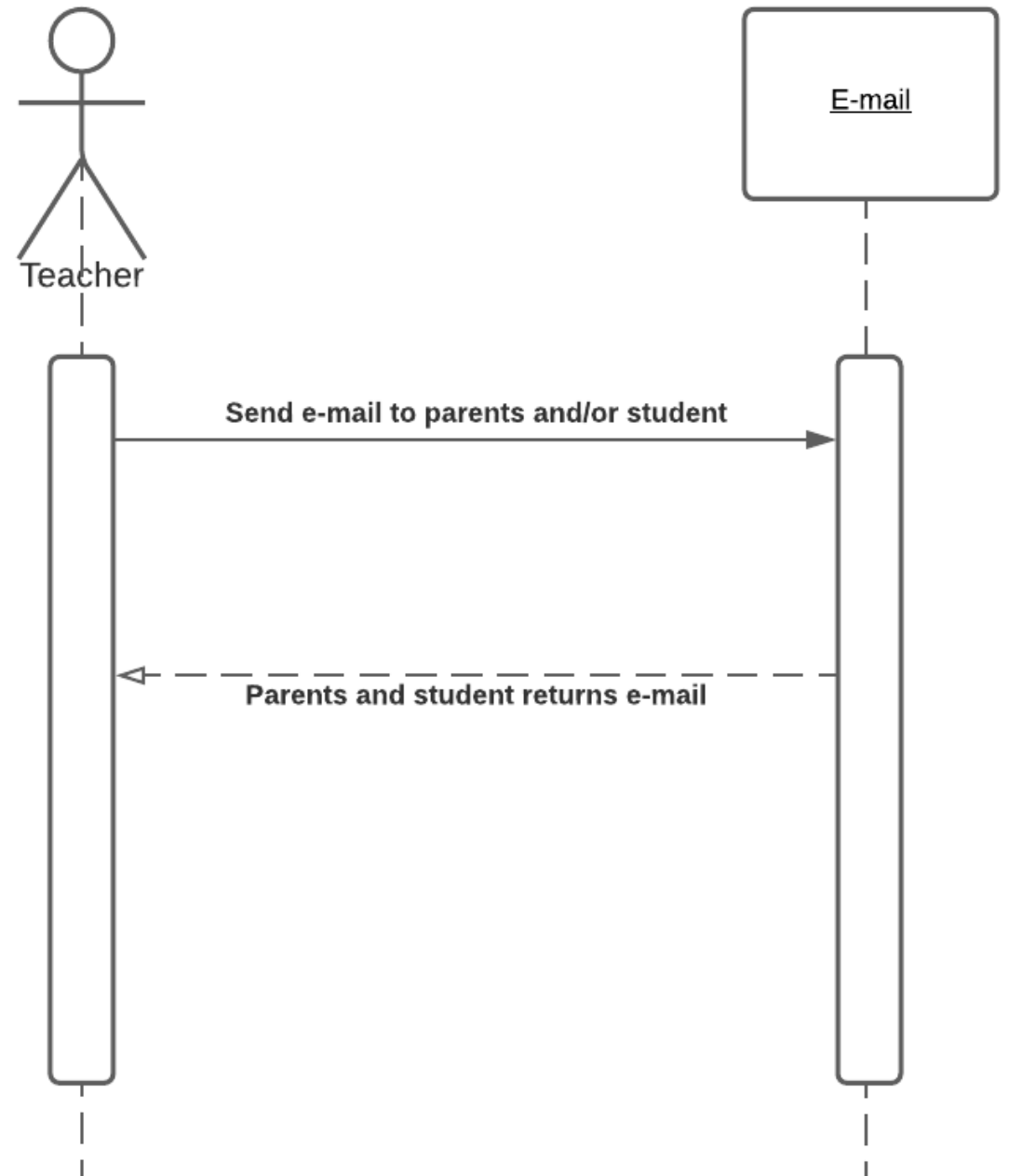
# Sequence Diagram – Class Roster and Attendance

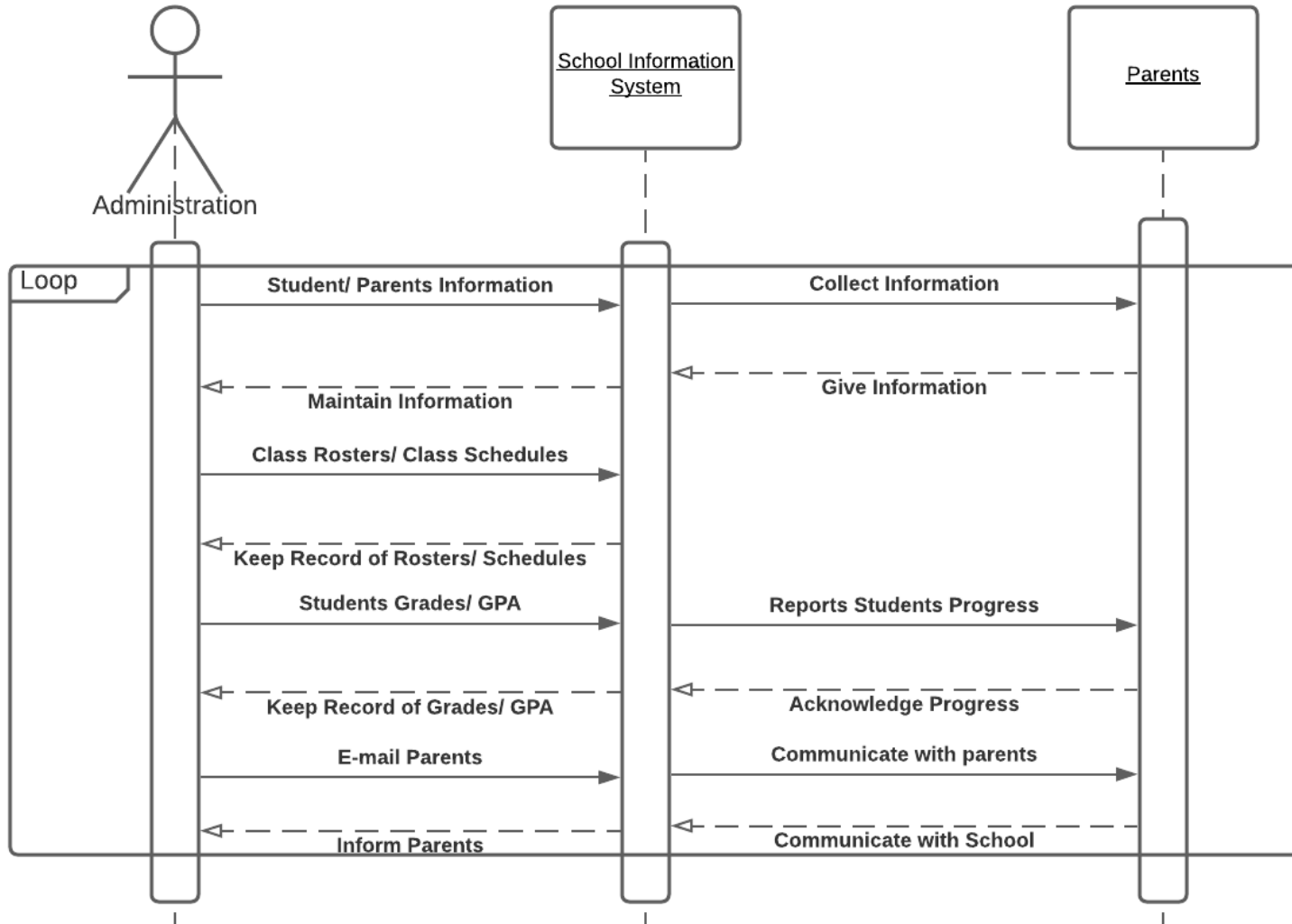


# Sequence Diagram – Students Grades

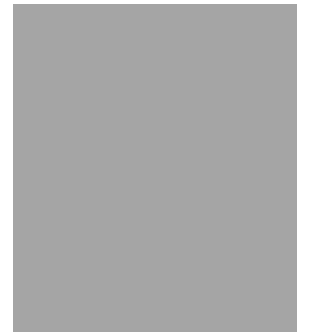


# Sequence Diagram – E-mail Parents / Students

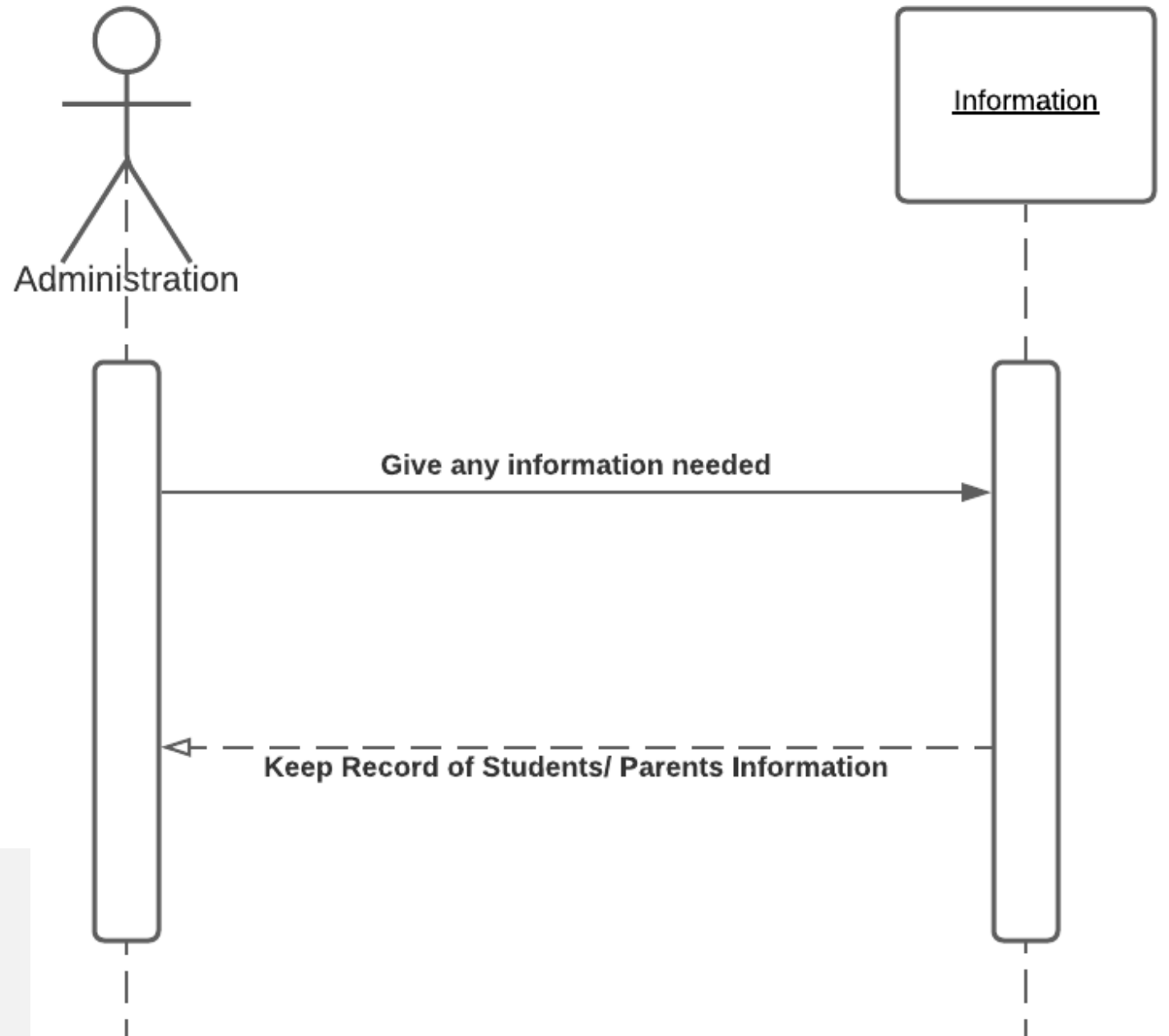




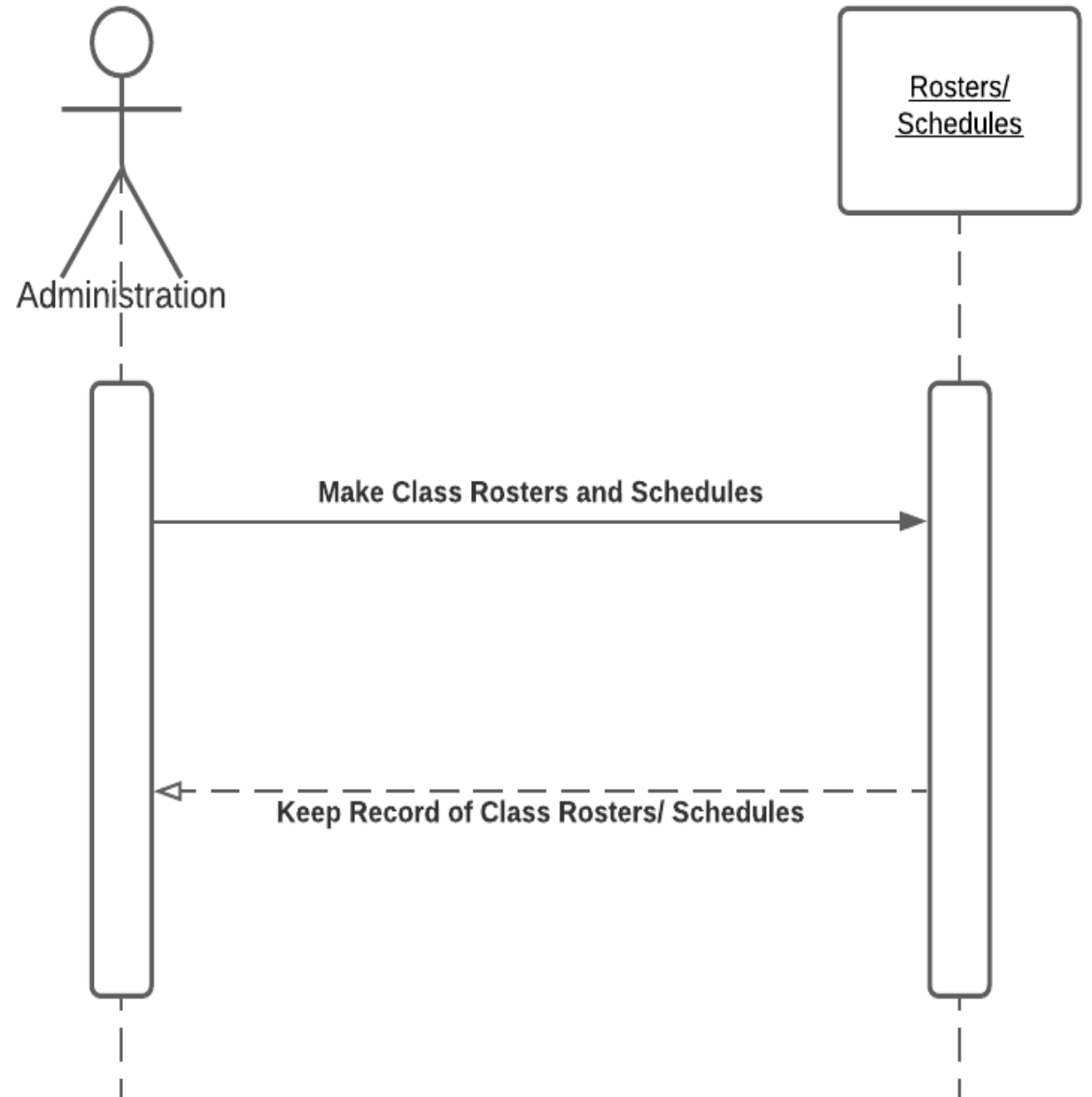
# System Sequence Diagram - Administration



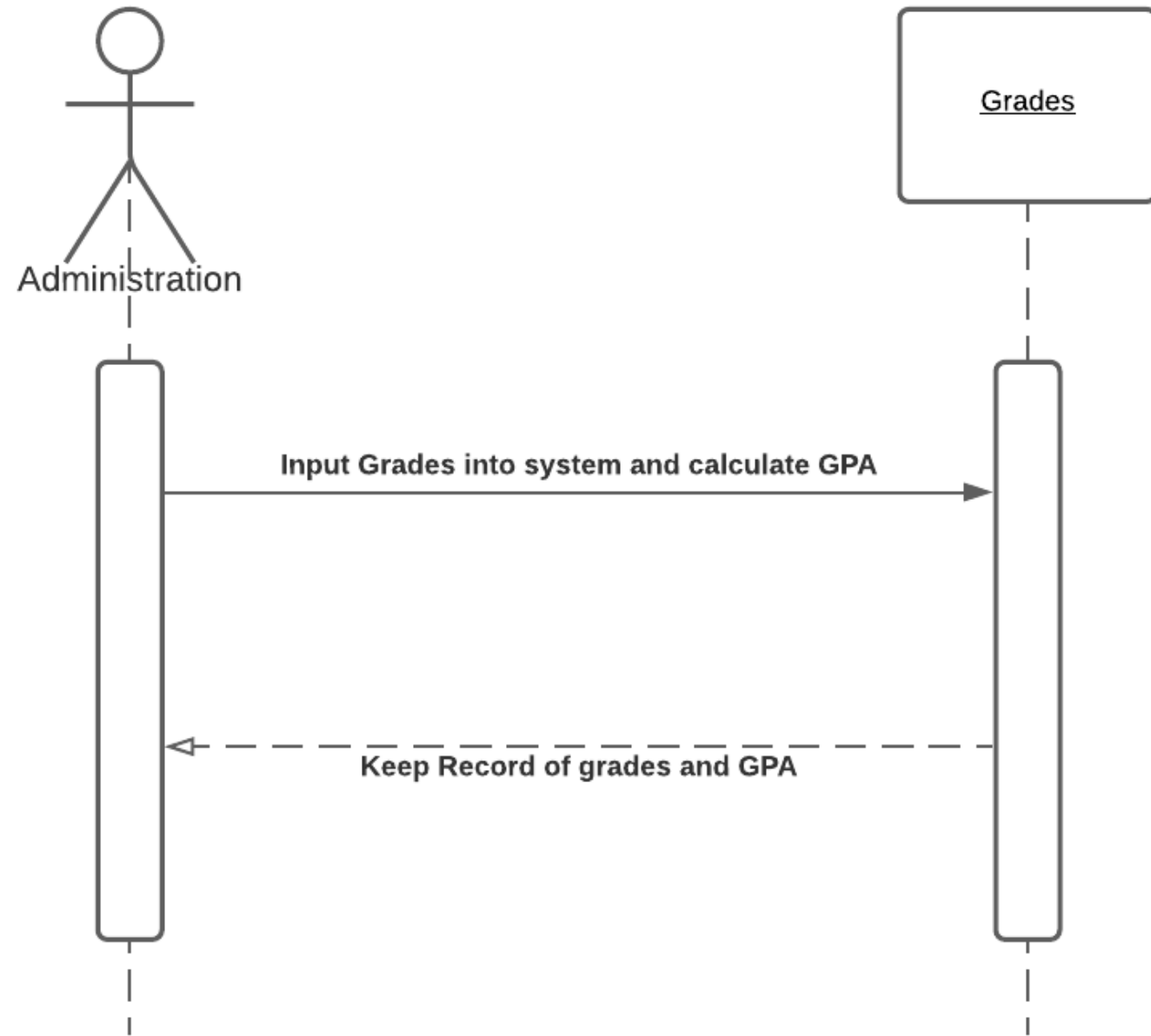
# Sequence Diagram – Students and Parents Information



# Sequence Diagram – Class Rosters and Schedules

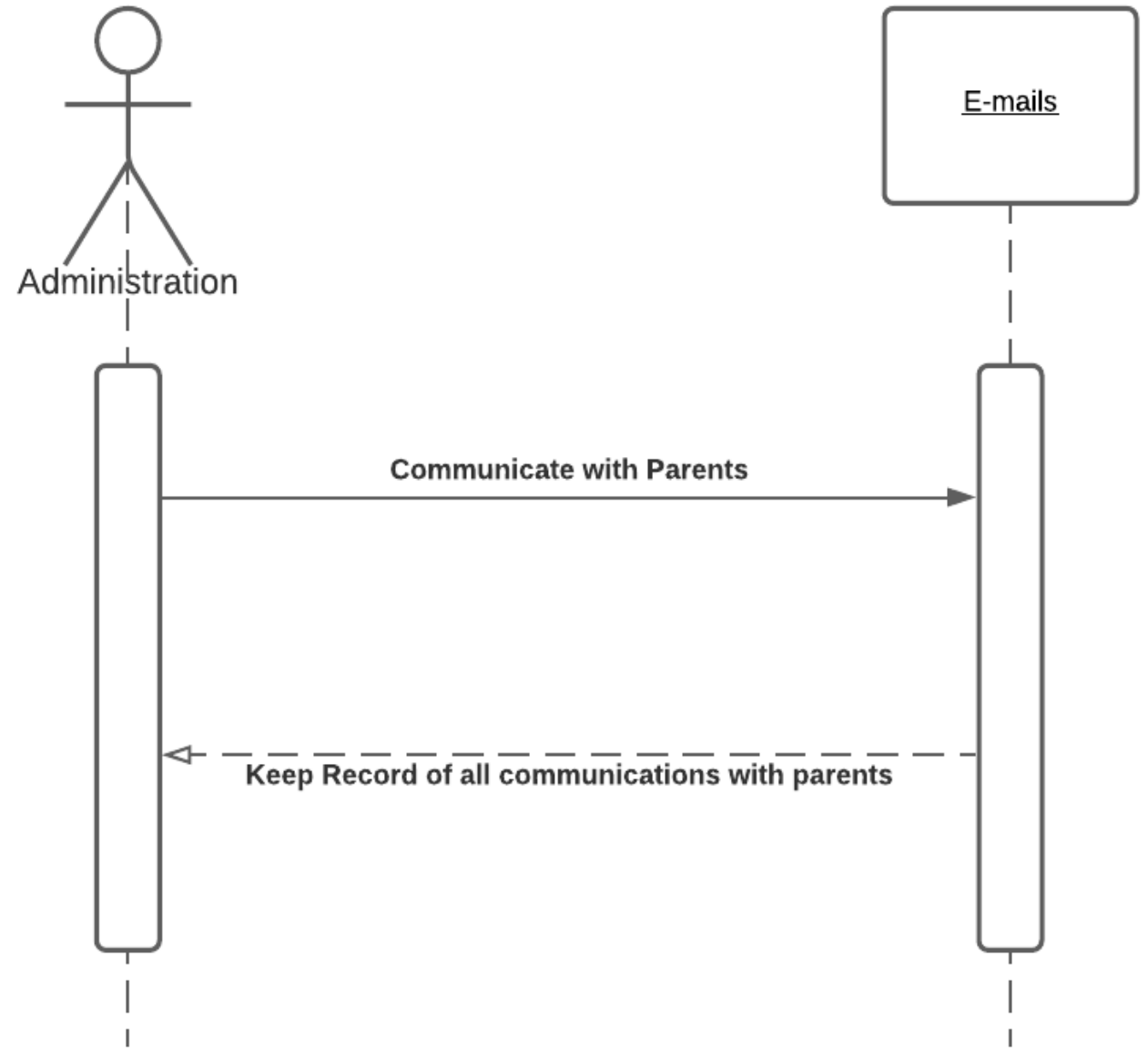


# Sequence Diagram – Class Grades and GPA





# Sequence Diagram – E-mail Parents



# Class Diagram

