Class Class:

Attributes:

classID: String

courseName: String

professor: String

scheduleTime: DateTime

assignments: List(Assignment)

Methods:

viewAssignment():

return assignments

addAssignment(assignment: Assignment):

assignments.append(assignment)

updateAssignment(assignmentID: String, updatedAssignment: Assignment):

find assignment by assignmentID in assignments

update assignment with updatedAssignment

deleteAssignment(assignmentID: String):

remove assignment from assignments by assignmentID

viewClass(courseID: String):

return course by courseID

addClass(course: Course):

add course to system

updateClass(courseID: String, updatedCourse: Course):

find course by courseID and update with updatedCourse

deleteClass(courseID: String):

remove course from system by courseID

viewProfessor(professorID: String):

return professor details by professorID

addProfessor(professorName: String):

add professor to course

updateProfessor(professorID: String, updatedProfessor: String):

update professor details by professorID

deleteProfessor(professorID: String):

remove professor from course

Class Student:

Attributes:

studentID: String

name: String

email: String

major: String

graduationYear: Int

Methods:

addName(name: String):

set student.name to name

viewName():

return student.name

updateName(name: String):

update student.name with name

addEmail(email: String):

set student.email to email

viewEmail():

return student.email

updateEmail(email: String):

update student.email with email

addMajor(major: String):

set student.major to major

viewMajor():

return student.major

updateMajor(major: String):

update student.major with major

addGraduationYear(year: Int):

set student.graduationYear to year

viewGraduationYear():

return student.graduationYear

updateGraduationYear(year: Int):

update student.graduationYear with year

deleteGraduationYear():

remove student.graduationYear

Class GraduationTracker:

Attributes:

studentID: String

requiredCourses: List(Course)

completedCourses: List(Course)

Methods:

addGraduationTracker():

create new graduation tracker for student

viewGraduationTracker():

return all required and completed courses for student

updateGraduationTracker():

update required or completed courses

deleteGraduationTracker():

remove graduation tracker for student

viewRequiredCourses():

return list of required courses

addRequiredCourses(course: Course):

add course to requiredCourses list

updateRequiredCourses(courseID: String, updatedCourse: Course):

update required course with updatedCourse

deleteRequiredCourses(courseID: String):

remove course from requiredCourses list

viewCompletedCourse():

return list of completed courses

addCompletedCourse(course: Course):

add course to completedCourses list

updateCompletedCourse(courseID: String, updatedCourse: Course):

update completed course with updatedCourse

deleteCompletedCourse(courseID: String):

remove course from completedCourses list

Class Schedule:

Attributes:

scheduleID: String

classes: List(Course)

extracurriculars: List(Activity)

Methods:

viewSchedule():

return classes and extracurriculars for the student

addSchedule(schedule: Schedule):

add schedule to student

updateSchedule(scheduleID: String, updatedSchedule: Schedule):

update schedule details for scheduleID

deleteSchedule(scheduleID: String):

remove schedule by scheduleID

viewClass(courseID: String):

return course details for courseID

addClass(course: Course):

add course to schedule

updateClass(courseID: String, updatedCourse: Course):

update course details in the schedule

deleteClass(courseID: String):

remove course from schedule

viewActivity(activityID: String):

return activity details for activityID

addActivity(activity: Activity):

add extracurricular activity

updateActivity(activityID: String, updatedActivity: Activity):

update extracurricular activity details

deleteActivity(activityID: String):

remove extracurricular activity

Class Club:

Attributes:

groupID: String

clubName: String

clubDescription: String

members: List(Student)

Methods:

addClub(clubName: String, clubDescription: String):

create new club and set clubName and clubDescription

deleteClub(groupID: String):

remove club by groupID

updateClub(groupID: String, clubName: String, clubDescription: String):

update clubName and clubDescription for club with groupID

viewClub(groupID: String):

return club details by groupID

addMember(student: Student):

add student to club members

deleteMember(studentID: String):

remove student from club by studentID

updateMember(studentID: String, updatedStudent: Student):

update student details in the club

viewMember(studentID: String):

return member details by studentID

viewMembers():

return list of club members

Class StudyGroup:

Attributes:

groupID: String

members: List(Student)

Methods:

addStudyGroup():

create new study group

deleteStudyGroup():

delete study group

viewCourse():

return list of courses associated with the study group

addCourse(course: Course):

add course to the study group

updateCourse(courseID: String, updatedCourse: Course):

update course details in the study group

deleteCourse(courseID: String):

remove course from the study group

viewMember():

return list of members in the study group

addMember(student: Student):

add student to the study group

updateMember(studentID: String, updatedStudent: Student):

update student details in the study group

deleteMember(studentID: String):

remove student from the study group

Class Event:

Attributes:

eventID: String

eventName: String

eventDate: DateTime

eventLocation: String

attendees: List(Student)

Methods:

viewEvent():

return event details

addEvent(event: Event):

create new event

updateEvent(eventID: String, updatedEvent: Event):

update event details

deleteEvent(eventID: String):

remove event by eventID

addAttendee(student: Student):

add student to the event attendees

removeAttendee(studentID: String):

remove student from event attendees

Class Textbook:

Attributes:

bookID: String

title: String

author: String

condition: String

price: Double

Methods:

viewTitle():

return title of textbook

addTitle(title: String):

set textbook title to title

updateTitle(title: String):

update textbook title with new title

deleteTitle():

remove textbook title

viewAuthor():

return author of textbook

addAuthor(author: String):

set textbook author to author

updateAuthor(author: String):

update textbook author with new author

deleteAuthor():

remove textbook author

viewCondition():

return condition of textbook

addCondition(condition: String):

set textbook condition to condition

updateCondition(condition: String):

update textbook condition with new condition

deleteCondition():

remove textbook condition

viewPrice():

return price of textbook

addPrice(price: Double):

set textbook price to price

updatePrice(price: Double):

update textbook price with new price

deletePrice():

remove textbook price

viewTextbook():

return full details of textbook

addTextbook(bookID: String, title: String, author: String, condition: String, price: Double):

create new textbook with specified details

updateTextbook(bookID: String, title: String, author: String, condition: String, price: Double):

update textbook details based on bookID

deleteTextbook(bookID: String):

remove textbook by bookID