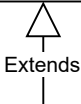


Course
<div>- CourseCode : String</div> <div>- CourseTitle : String</div> <div>- givenSemester : Semester</div> <div>- courseSchedule : Schedule</div> <div>- students : ArrayList<Student></div> <div>- courseCredit : int</div> <div>- prerequisites : ArrayList<String></div> <div>- section : String</div> <div>- quota : int</div> <div>- type : String</div> <div>- numOfStudents : int</div> <div>- hourCollisionCounter : int</div> <div>- prerequisiteFailureCounter : int</div>
<div>+ Course()</div> <div>+ Course(courseCode : String, courseTitle : String, givenSemester : Ser courseSchedule : Schedule, students : ArrayList<Student>, courseCred prerequisites : ArrayList<String>, section : String, quota : int, numOfStudents : int, type : String)</div> <div>+ getPrerequisiteFailureCounter() : int</div> <div>+ setPrerequisiteFailureCounter(prerequisiteFailureCounter : int) : void</div> <div>+ incrementPrerequisiteFailiureCounter() : void</div> <div>+ getCourseCode() : String</div> <div>+ setCourseCode(courseCode : String) : void</div> <div>+ getType() : String</div> <div>+ setType(type : String) : void</div> <div>+ getCourseTitle() : String</div> <div>+ setCourseTitle(courseTitle : String) : void</div> <div>+ getGivenSemester() : Semester</div> <div>+ setGivenSemester(givenSemester : Semester) : void</div> <div>+ getCourseSchedule() : Schedule</div> <div>+ setCourseSchedule(courseSchedule : Schedule) : void</div> <div>+ getStudents() : ArrayList<Student></div> <div>+ setStudents(students : ArrayList<Student>) :void</div> <div>+ getCourseCredit() : int</div> <div>+ setCourseCredit(courseCredit : int) : void</div> <div>+ getPrerequisites() : ArrayList<String></div> <div>+ setPrerequisites(prerequisites : ArrayList<String>) : void</div> <div>+ getSection() : String</div> <div>+ setSection(section : String) : void</div> <div>+ getQuota() : int</div> <div>+ setQuota(quota : int) : void</div> <div>+ getNumOfStudents() : int</div> <div>+ setNumOfStudents(numOfStudents : int) : void</div> <div>+ getHourCollisionCounter() : int</div> <div>+ incrementHourCollisionCounter() : void</div> <div>+ toString() : String</div>



ElectiveCourse
<div>- electiveCourseCode : String</div> <div>- electiveCourseTitle: String</div>
<div>+ ElectiveCourse()</div> <div>+ ElectiveCourse(courseCode : String, courseTitle : String, givenSemester : Semester, courseSchedule : Schedule, students : ArrayList<Student>, courseCredit : int, prerequisites : ArrayList<String>, section : String, quota : int, numOfStudents : int, type : String, electiveCourseTitle : String, electiveCourseCode : String)</div> <div>+ getElectiveCourseCode() : String</div> <div>+ setElectiveCourseCode(electiveCourseCode : String) : void</div> <div>+ getElectiveCourseTitle() : String</div> <div>+ setElectiveCourseTitle(electiveCourseTitle : String) : void</div>

Transcript
<div>- semester : int</div> <div>- gpa : ArrayList<Double></div> <div>- totalGpa : double</div> <div>- passedCredits : ArrayList<Integer></div> <div>- failedCredits : ArrayList<Integer></div> <div>- coursesPassed : ArrayList<ArrayList<Object[]>></div> <div>- courseFailed : ArrayList<ArrayList<Object[]>></div> <div>- coursesNotTaken : ArrayList<Object[]></div> <div>- activeCourses : ArrayList<Object[]></div>
<div>+ Transcript()</div> <div>+ Transcript(semester : int, gpa : ArrayList<Double>, totalGpa : double passedCredits :ArrayList<Integer>, failedCredits : ArrayList<Integer>, coursesPassed : ArrayList<ArrayList<Object[]>>, coursesFailed : ArrayList<ArrayList<Object[]>>, coursesNotTaken : ArrayList<Object[]>, activeCourses : ArrayList<Object[]>)</div> <div>+ getCoursesNotTaken() : ArrayList<Object[]></div> <div>+ setCoursesNotTaken(coursesNotTaken : ArrayList<Object[]>) : void</div> <div>+ getTotalGpa() : double</div> <div>+ setTotalGpa(totalGpa : double) : void</div> <div>+ getSemester() : int</div> <div>+ setSemester(semester : int) : void</div> <div>+ getGpa() : ArrayList<Double></div> <div>+ setGpa(gpa : ArrayList<Double>) : void</div> <div>+ getPassedCredits() : ArrayList<Integer></div> <div>+ getFailedCredits() : ArrayList<Integer></div> <div>+ getCoursesPassed() : ArrayList<ArrayList<Object[]>></div> <div>+ setCoursesPassed(coursesPassed : ArrayList<ArrayList<Object[]>>)</div> <div>+ getCoursesFailed() : ArrayList<ArrayList<Object[]>></div> <div>+ setCoursesFailed(coursesFailed : ArrayList<ArrayList<Object[]>>) :</div> <div>+ getActiveCourses() : ArrayList<Object[]></div> <div>+ setActiveCourses(activeCourses : ArrayList<Object[]>) : void</div> <div>+ calculateGPAs(term : int) : void</div> <div>+ calculateTermGPA(termPassed : ArrayList<Object[]>, termFailed : ArrayList<Object[]>) : double</div> <div>+ calculateTakenCredit() : int</div> <div>+ calculateCompletedCredit() : int</div> <div>+ <u>get_gradeEquivalent(grade : String) : double</u></div>

Registration
+ <u>semesterCount</u> : int = 0
+ Registration()
+ <u>register</u> (students : ArrayList<Student>,semester : int) : void
+ <u>checkPrerequisites</u> (checkCourse : Object[], <u>globalPassedCourses</u> : ArrayList<ArrayList<Object[]>>) : boolean
+ <u>getAvailableCoursesForRegistration</u> (semester : int, gpa : double, <u>globalPassedCourses</u> : ArrayList<ArrayList<Object[]>>, <u>globalFailedCourses</u> : ArrayList<ArrayList<Object[]>>, <u>notTakenCourses</u> : ArrayList<Object[]>) : ArrayList<Object[]>
+ <u>writeDepartmentOutput</u> () : void
+ <u>getAvailableCoursesForSimulation</u> (semester : int, gpa : double, <u>globalPassedCourses</u> : ArrayList<ArrayList<Object[]>>, <u>globalFailedCourses</u> : ArrayList<ArrayList<Object[]>>, <u>notTakenCourses</u> : ArrayList<Object[]>) : ArrayList<Object[]>
+ <u>replaceElectives</u> (active courses : ArrayList<Object[]>) : void

Schedule
- courseTime : int[]
+ Schedule()
+ Schedule(courseTime : int [])
+ getCourseTime() : int[]
+ setCourseTime(courseTime : int[]) : void
+ toString() : String

OutputGenerator
+ <u>writeStudents</u> (students : ArrayList<Student>) : void
+ <u>evaluateCourseStatistics</u> () : void
+ <u>convertToJson</u> () : String
+ <u>removeDuplicates</u> (list : ArrayList<String>) : ArrayList<String>

DepartmentStatistics
+ <u>quotaCount</u> : int = 0
+ <u>conflictCount</u> : int = 0
+ <u>engineeringProjectCount</u> : int = 0
+ <u>teCount</u> : int = 0
+ <u>quotaArray</u> : ArrayList<String>
+ <u>conflictArray</u> : ArrayList<String>
+ <u>engineeringProjectArray</u> : ArrayList<String>
+ <u>teCountArray</u> : ArrayList<String>

GenerateStudent
+ <u>grades</u> : String[]
- <u>firstNames</u> : String[]
- <u>lastNames</u> : String[]
+ <u>students</u> : ArrayList<Student>
- <u>trans</u> : Transcript
+ GenerateStudent()
+ GenerateStudent(numOfStudentsPerYear : int, semester : int)
+ <u>getStudents</u> () : ArrayList<Student>
+ <u>setStudents</u> (students : ArrayList<Student>) : void
+ <u>generate_students</u> (numOfStudentsPerYear : int, semester : int) : void
+ <u>generate_transcript</u> (rand_semester : int) : void

StudentID
+ <u>order</u> : int
- id : String
- departmentCode : String = "1501"
- year : int
+ StudentID(year : int)
+ <u>getOrder</u> () : int
+ <u>setOrder</u> (order : int) : void
+ getId() : String
+ setId(id : String) : void
+ getDepartmentCode() : String
+ setDepartmentCode(departmentCode : String) : void
+ getYear() : int
+ setYear(year : int) : void
+ <u>generateRandomId</u> (year : int) : String

Semester
- num : int
- name : String
+ Semester()
+ Semester(num : int)
+ getNum() : int
+ setNum(num : int) : void
+ getName() : String
+ setName(name : String) : void
+ toString() : String