



LecturerMenu advisorController: AdvisorController lecturerController: LecturerController scanner: Scanner LecturerMenu(LecturerController) - stringConstants: StringConstants + LecturerMenu() + AdvisorMenu(AdvisorController) + showGivenCourses(): void + advisorMenu(): void + showStudents(): void + isValidFormat(String): boolean + lecturerMenu(): void + sortNumbers(String): ArrayList + createCourse(): void + ifSelectionOutOfBounds(ArrayList, Student): boolean Transcript loginScanner: Scanner stringConstants: StringConstants - course: Course loggedInUser: Person - grade: String students: ArrayList +Transcript(ArrayList, String) advisors: ArrayList + Grade()

+ Grade(Course, String)

setCourse(Course): void

+ getCourse(): Course

getGrade(): String

+ setGrade(String): void

lecturers: ArrayList

+ loginMenu(): void

+ personMenu(): void

+ getLoggedInUser(): Person

+ setLoggedInUser(Person): void

+ authenticate(String, String): boolean

json: DataUtils

⊦ Menu()

AdvisorMenu

-ArrayList listGrades

+Transcript(ArrayList)

+getGrades() String

+getNotes() String

+toString() String

+setNotes(String) void

+getGradeList() ArrayList

+addGrade(Grade) boolean

+deleteGrade(Grade) boolean

+calculateCumulativeGPA() double

+calculateSemesterGPA(int) double

-String notes

+Transcript()

StudentMenu studentController: StudentController + StudentMenu(StudentController) + StudentMenu() + studentMenu(): void + courseAdding(): void + courseDropping(): void + showSelectedCourses(): void + showAvailableCourses(): void + showTranscript(): void + sendApprovalRequest(): void + parseInput(String, ArrayList): ArrayList

StringConstants -String WELCOME_MESSAGE -String LOGIN_MESSAGE -String USERNAME_MESSAGE -String PASSWORD_MESSAGE -String LOGIN_SUCCESSFUL_MESSAG -String LOGIN_UNSUCCESSFUL_MESS -String STUDENT_MENU_MESSAGE -String STUDENT_MENU_OPTIONS -String LECTURER_MENU_MESSAGE -String LECTURER_MENU_OPTIONS -String ADVISOR_MENU_MESSAGE -String ADVISOR_MENU_OPTIONS String INVALID_OPTION_MESSAGE

- startTime: String

endTime: String

+ TimeInterval()

+ getStartTime(): String

+ getEndTime(): String

- dayOfWeek: String

DataInitializer -ArrayList courses -ArrayList mandatoryCourses -ArrayList nonTechnicalElectives -ArrayList technicalElectives ArrayList lecturers ArrayList students -ArrayList advisors -String[] locations -ArrayList monday -ArrayList tuesday -ArrayList wednesday -ArrayList thursday +main(String[]): void **TimeInterval**

+ TimeInterval(String, String, String) + TimeInterval(String, String) + setStartTime(String): void + setEndTime(String): void + getDayOfWeek(): String + setDayOfWeek(String): void + getTotalTimeInMinutes(): int + getTimeIntervalInfo(): String + isOverlapping(TimeInterval): boolean

- students: ArrayList - courses: ArrayList - lecturers: ArrayList - advisors: ArrayList - mandatories: ArrayList - technicalElectives: ArrayList - nonTechnicalElectives: ArrayList - databaseFolder: String + DataUtils() + DataUtils(int) + save(): void + getStudents(): ArrayList + getCourses(): ArrayList + getLecturers(): ArrayList + getAdvisors(): ArrayList + getMandatories(): ArrayList + getTechnicalElectives(): ArrayList + getNonTechnicalElectives(): ArrayList + getInstance(): DataUtils + getStudentFiles(): ArrayList + getParametersFile(): File + updateValue(String, String, String): String + writePretty(): void + readStudents(): ArrayList + writeStudents(ArrayList): void + readCourses(): ArrayList + writeCourses(ArrayList): void + readLecturers(): ArrayList + writeLecturers(ArrayList): void + readAdvisors(): ArrayList + writeAdvisors(ArrayList): void + readMandatoryCourses(): ArrayList + writeMandatoryCourses(ArrayList): void + readTechnicalElectiveCourse(): ArrayList

> + writeTechnicalElectiveCourse(ArrayList): void + readNonTechnicalElectiveCourses(): ArrayList + writeNonTechnicalElectiveCourse(ArrayList): void

DataUtils