+addCourseToCart(course: Course): void +removeCourseFromCart(course: Course): void -isTimeConflict(time1: String, time2: String): boolean +getCart(): List<Course> +checkPrerequisites(course: Course): boolean +isCourseInCart(course: Course): boolean +getCoursesByCategory(category: String): List<Course>
+addCourse(course: Course): void <u>+saveCourses(): void</u> +searchCourses(query: String, type: String): List<Course> +rateCourse(course: Course, rating: double): void <u>+removeCourse(course: Course): void</u> +updateCourse(course: Course, name: String, time: String, instructor: String, description: String, prerequisites: String, credits: int, category: String): void -username:String 1...* -password: String UserManagementSystem +User(username:String,password:String) -loggedInUser: User +getUsername():String +getPassword():St -usernameField: JTextField -users: Map<String, User> -completedCourses: List<Course -passwordField: JPasswordField CourseCategoryGUI -loginAsStudentButton: JButton <u>+loginUser(user: User): void</u> CourseDetailsGUI -loginAsAdminButton: JButton - -> <u>+logoutUser(): void</u> ، -courseList: JList<Course> +getLoggedInUser(): User
-createStudentWithCompletedCourses(userData: String): void -course: final Course -statusLabel: JLabel Course -listModel: DefaultListModel<Course> Admin AddCourseGUI -courseNameLabel: JLabel -filePath: String='users.txt' -courseName: String -courseTime: String -viewDetailsButton: JButton -courseTimeLabel: JĹabel -createAdmin(userData: String): void -addCourseButton: JButton -categoryList: JList<String> -authenticateStudent(username: String, password: String): void -completedCourses:List<Course> +addUser(user: User): void -courseInstructorLabel: JLabel +Student(username:String,password:String) -categoryModel: DefaultListModel<String> -authenticateAdmin(username: String, password: String): void -courseInstructor: String -courseDescriptionLabel: JLabel -selectCategoryButton: JButton K-----+getUsers(): Map<String, User> -courseDescription: String +addCompletedCourse(course:Course):void +CourseCategoryGUI(category: String) -courseCreditsLabel: JLabel <u>+loadUsers(filePath: String): void</u> -btn_click_category(selectedCategory: String): void -prerequisites: String +getCompletedCourses():List<Course> -loadCourses(): void -coursePrerequisitesLabel: JLabel +authenticateUser(username: String, password: String, isAdmin: boolean): boolean +hasCompletedCourse(courseName:String):boolean class diagram -credits: int -btn_click_viewDetails(selectedCourse: Course): void -courseRatingLabel: JLabel -rating: double -btn_click_addCourse(selectedCourse: Course): void +CourseDetailsGUI(course: Course) +Course(courseName: String, courseTime: -contentPane: JPanel String, courseInstructor: String, courseDescription: String, prerequisites: String, credits: int, _ - - - - - - - - - 1 rating: double, category: String) -lblCart: JLabel +getCourseName(): String +setCourseName(courseName: String): void -lblCredit: JLabel -addCourseButton: JButton -lblNumOfCredit: JLabel -updateCourseButton: JButton -viewCartButton: JButton -removeCourseButton: JButton -tblCourses: JTable -searchCourseButton: JButton +getCourseTime(): String -logoutButton: JButton +setCourseTime(courseTime: String): void __ _ _ _ _ _ _ _ _ _ _ _ _ _ _ -rateCourseButton: JButton -tableModel: DefaultTableModel -addCourseButton: JButton -btnDelete: JButton -logoutButton: JButton +getCourseInstructor(): String -btn_click_createCourseGUI(): void +setCourseInstructor(courseInstructor: String): void -btnValidate: JButton -btn_click_addCourseGUI(): void -scrollPane: JScrollPane -btn_click_updateCourseGUI(): void +getCourseDescription(): String -btn_click_viewCartGUI(): void +setCourseDescription(courseDescription: String): void -btn_click_removeCourseGUI(): void -getTotalCredits(): void -btn_click_searchCourseGUI(): void -btn_click_logout(): void +getPrerequisites(): String -btn_click_rateCourseGUI(): void -btn_delete_clk(): void +setPrerequisites(prerequisites: String): void -btn_click_logout(): void -btn_validate_clk(): void +getCredits(): int +setCredits(credits: int): void +getRating(): double +setRating(rating: double): void SearchCourseGUI +getCategory(): String +setCategory(category: String): void L -searchField: JTextField - r - - - - - - -- -- --- -searchByNameButton: JButton +toString(): String {----i L_______ -listModel: DefaultListModel<Course> -btn_click_performSearch(query: String, type: String): void -courseComboBox: JComboBox<Course>
-ratingSpinner: JSpinner €----! -rateButton: JButton L – – – di-loadCompletedCourses(): void -loadComboBox(student: Student): void -rateSelectedCourse(selectedCourse: Course, rating: double): void CreateCourseGUI UpdateCourseGUI -courseNameField: JTextField -courseComboBox: JComboBox<Course> RemoveCourseGUI -courseTimeField: JTextField -courseNameField: JTextField -courseInstructorField: JTextField -courseComboBox: JComboBox<Course> -courseTimeField: JTextField -courseDescriptionField: JTextField -removeButton: JButton -courseInstructorField: JTextField -coursePrerequisitesField: JTextField +RemoveCourseGUI() -courseDescriptionField: JTextField -courseCreditsSpinner: JSpinner -btn_click_removeCourse(selectedCourse: Course): void -coursePrerequisitesField: JTextField -courseCategoryField: JTextField -courseCreditsSpinner: JSpinner -createButton: JButton -courseCategoryField: JTextField -btn_click_createCourse(name: String, time: -updateButton: JButton String, instructor: String, description: -loadCourseDetails(): void String, prerequisites: String, credits: int, category: String): void -updateCourseDetails(): void -btn_update_clk(course: Course, name: String, time: String, instructor: String, description: String, prerequisites: String, credits: int, category: String): void ____ ι______-

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