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| **User** |
| -username: String  -password: String  -firstName: String  -lastName: String |
| +User(username: String, password: String, firstName: String, lastName: String)  +getUserName(): String  +getPassword(): String  +getFirstName(): String  +getLastName(): String  +setUsername(): void  +setPassword(): void  +setFirstName(): void  +setLastName(): void  +launch(): void  +enterInfo(): String[]  +exit(): void  +isInCourseList(courseID: String) : int  +isInCourseList(name:String, courseID:String, sectionNum: int) : int  +isInStudentList(firstName:String, lastName:String, ID:String) : int |

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| **Course** |
| -name: String  -ID: String  -maxStudent: int  -currentStudent: int  -nameList: ArrayList<Student>  -instructor: String  -sectionNum: int  -location: String |
| +Course(name:String, ID:String, maxStudent:int, instructor:String, sectionNum:int, location:String)  +getName(): String  +getID(): String  +getMax(): int  +getCurrent(): int  +getNameList(): ArrayList<Student>  +getInstructor: String  +getSectionNum(): int  +getLocation(): String  +setMax(newMax: int): void  +setNameList(firstName:String, lastName:String, ID:String, action: String):void  +setInstructor(newInstr: String): void  +setSectionNum(newNum: int): void  +setLocation(newLocation:String):void  +compareTo(c: Course): int |

**UML Diagram**

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| **AdminInterface** |
| +createCourse():void  +deleteCourse(): void  +editCourse(): void  +displayInfoByID(): void  +registerStudent(): void  +viewAllCourses(): void  +writeFullToFile(): void  +viewSpecificCourse(): void  +viewSpecificStudent(): void  +sortCourse(): void |

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| **StudentInterface** |
| +viewAllCourses(): void  +viewNotFull(): void  +registerCourse(): void  +withdrawCourse(): void  +viewRegistered(): void |

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| **Student** |
| -ID: String  -registeredCourses: ArrayList<Course> |
| +Student( username:String, password:String, firstName:String, lastName:String)  +getID(): String  +getRegisteredCourses: ArrayList<Course>  +viewAllCourses(): void  +viewNotFull(): void  +registerCourse(): void  +withdrawCourse(): void  +viewRegistered(): void  +isInRegistered(registered: ArrayList<Course>, name:String): int |

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| **Pool** |
| -courseList: ArrayList<Course>  -studentList: ArrayList<Student> |
| +storeCourseInfo(): void  +serialCourse(): void  +serialStudent(): void  +deserialCourse(): void  +deserialStudent(): void |

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| **Admin** |
| +Admin(username:String, password:String, firstName:String, lastName:String)  +createCourse():void  +deleteCourse(): void  +editCourse(): void  +displayInfoByID(): void  +registerStudent(): void  +viewAllCourses(): void  +writeFullToFile(): void  +viewSpecificCourse(): void  +viewSpecificStudent(): void  +sortCourse(): void |

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| **Serializable Interface** |

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| **Comparable<E> Interface** |

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| **Main** |
| +Main(String[] args)  +run(): void  +userAction(action:String, u: User): void |

**Workflow**

