

## Input Data Types

- Table: string
- Where: string
- Email: string
- ClassID: integer
- Schedule: integer[60]
- Password: string
- Name: string
- Role: boolean
  
- buildScheduleQuery()
  - Builds the string used to specify the attributes used to store a schedule in a select SQL command
- buildJoinedScheduleQuery(table)
  - Similar to buildScheduleQuery but specifies the table it comes from. Used for getting schedules from joined tables
- emptySchedule()
  - Returns a tuple of 60 instances of 0
- stringEmptySchedule()
  - Returns a string 60 0s separated by commas
- checkExists(table, where)
  - True if yes, false if no
- containsForbidden(string)
  - If the input string has a forbidden character in it, returns true or false appropriately
- getTeachers(classID)
  - Returns an array of all the emails of the teachers in a class
- getSchedules
  - getStudentSchedules(classID)
    - Array of (email, schedule) of students in a class on success, -1 on failure
  - getTeacherSchedules(classID)
    - Array of (email, schedule) of teachers in a class on success, -1 on failure
- getUserSchedule(email)
  - Schedule array on success, -1 on failure
- getClassSchedule(classID)
  - Schedule array on success, -1 on failure
- getClassOfficeHours(classID)
  - Schedule array on success, -1 on failure
- setSchedule
  - setUserSchedule(email, schedule)
    - 0 if target exists, -1 on failure
  - setClassSchedule(classID, schedule)
    - 0 if target exists, -1 on failure
  - setClassOfficeHours(classID, schedule)

- 0 if target exists, -1 on failure
- addUser(email, password, role)
  - 0 on success, -1 if user already exists
  - Role determines if they're a teacher or not, true if teacher, false if student
- setUsername(email, name)
  - 0 on success, -1 if user doesn't exist
- changePassword(email, password, newPassword)
  - 0 on success, -1 if user doesn't exist or password is incorrect
- isTeacher(email)
  - true if the user exists and is a teacher, false otherwise
- addClass(classID, name, email)
  - 0 on success, -1 if class already exists
- setClassName(classID, name)
  - 0 on success, -1 if class doesn't exist
- getUsername(email)
  - String on success, -1 on failure
- getUserDetails(email)
  - Array of email, name, and schedule on success, -1 on failure
- getClassname(classID)
  - String on success, -1 on failure
- getClassDetails(classID)
  - Array of classID, name, class hours schedule, and office hours schedule on success, -1 on failure
- deleteUser(email)
  - 0 on success, -1 if user doesn't exist
  - Deletes classes if the user was the last user in them

#### ■ UNIMPLEMENTED FEATURE

- deleteClass(classID)
  - 0 on success, -1 if class doesn't exist
- joinClass(email, classID, role)
  - 0 on success, -1 if class or user doesn't exist
- leaveClass(email, classID)
  - 0 on success, -1 if userClasses entry doesn't exist
  - Deletes class if there are no members left

#### ■ UNIMPLEMENTED FEATURE

- changeMemberRole(email, classID, role)
  - 0 on success, -1 if userClasses entry doesn't exist
- getUserClasses(email)
  - Array of (classID, role) of the user on success, -1 on failure
- getClassMembers(classID)
  - Array of (email, role) of the class members on success, -1 on failure