Authentication Module Part 1

Login Function

BEGIN

    GET username FROM txtUsername

    GET passwordChars FROM txtPassword

    CONVERT passwordChars TO password STRING

    IF NOT validateUsernameLogin(username) THEN

        RETURN

    END IF

    IF NOT validatePasswordFormat(password) THEN

        RETURN

    END IF

    SET isAuthenticated TO authenticateUser(username, password)

    IF isAuthenticated THEN

        DISPLAY "Login successful!" MESSAGE

        GET loggedInUserID FROM getLoggedInUserID()

        LOAD contacts FROM "src/storage/contact.csv" FOR loggedInUserID

    ELSE

        DISPLAY "Invalid username or password. Please try again." MESSAGE

    END IF

END

Sign Up Function

BEGIN

    GET username FROM txtUsername AND TRIM

    GET firstName FROM txtFirstName AND TRIM

    GET lastName FROM txtLastName AND TRIM

    GET passwordChars FROM txtPassword

CONVERT passwordChars TO password STRING AND TRIM

GET passwordConfirmChars FROM txtConfirmPassword

CONVERT passwordConfirmChars TO passwordConfirm STRING AND TRIM

IF NOT validateUsername(username) THEN

   RETURN

END IF

IF NOT validateName(firstName, "First Name") THEN

   RETURN

END IF

IF NOT validateName(lastName, "Last Name") THEN

   RETURN

END IF

IF NOT validatePasswordFormat(password) THEN

   RETURN

END IF

IF NOT validatePasswordMatch(password, passwordConfirm) THEN

   RETURN

END IF

SET userID TO getNextUserId()

SET hashedPassword TO hashPassword(password)

IF appendUserDataToCSV(userID, firstName, lastName, username, hashedPassword) THEN

   DISPLAY "Sign-up successful!" MESSAGE

ELSE

   DISPLAY "Error writing to file" MESSAGE

END IF

END

appendUserDataToCSV(userID, firstName, lastName, username, password)

START

    SET filePath TO "src\\storage\\user.csv"

    TRY

        OPEN fileWriter FOR filePath IN append mode

        OPEN bufferedWriter FOR fileWriter

        SET csvRecord TO JOIN userID, firstName, lastName, username, password WITH ","

        WRITE csvRecord TO bufferedWriter

        WRITE new line TO bufferedWriter

        RETURN true

    CATCH IOException

        PRINT stack trace

        RETURN false

    END TRY

END

getNextUserId()

START

    SET filePath TO "src\\storage\\user.csv"

    SET maxUserId TO 0

    TRY

        OPEN scanner FOR filePath

        IF scanner HAS next line THEN

            SKIP header line

        END IF

        WHILE scanner HAS next line

            READ line FROM scanner

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        SPLIT line BY "," INTO userDetails

        IF userDetails LENGTH > 0 THEN

            SET userID TO PARSE userDetails[0] AS INTEGER

            IF userID > maxUserId THEN

                SET maxUserId TO userID

            END IF

        END IF

    END WHILE

CATCH FileNotFoundException

    PRINT stack trace

END TRY

RETURN maxUserId + 1

END
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