

Security Tests

1. LIN
 - 1.1. First Log In
 - 1.1.1. User Log In
 - 1.1.1.1. LIN <valid username>
 - 1.1.1.1.1. <Invalid password>
 - 1.1.1.1.1.1. "Invalid Password"
 - 1.1.1.1.2. <valid password>
 - 1.1.1.1.2.1. Valid New Password
 - 1.1.1.1.2.1.1. Double check matching
 - 1.1.1.1.2.1.1.1. "OK"
 - 1.1.1.1.2.1.2. Passwords don't match
 - 1.1.1.1.2.1.2.1. "Passwords don't match"
 - 1.1.1.1.2.2. Invalid New Password
 - 1.1.1.1.2.2.1. "Invalid Password"
 - 1.1.1.2. LIN <invalid username>
 - 1.1.1.2.1. "Invalid UserID"
 - 1.1.2. Admin Log In
 - 1.1.2.1. LIN admin
 - 1.1.2.1.1. <Invalid password>
 - 1.1.2.1.1.1. "Invalid Password"
 - 1.1.2.1.2. <valid password>
 - 1.1.2.1.2.1. Valid New Password
 - 1.1.2.1.2.1.1. Double check matching
 - 1.1.2.1.2.1.1.1. "OK"
 - 1.1.2.1.2.1.2. Passwords don't match
 - 1.1.2.1.2.1.2.1. "Passwords don't match"
 - 1.1.2.1.2.2. Invalid New Password
 - 1.1.2.1.2.2.1. "Invalid Password"
 - 1.1.2.2. LIN <invalid username>
 - 1.1.2.2.1. "Invalid userID"
 - 1.2. Subsequent Log In
 - 1.2.1. LIN admin
 - 1.2.1.1. <Invalid password>
 - 1.2.1.1.1. "Invalid Password"
 - 1.2.1.2. <valid password>
 - 1.2.1.2.1. "OK"
 - 1.2.2. LIN <invalid username>
 - 1.2.2.1. "Invalid UserID"
 - 1.2.3. LIN <invalid characters>

- 1.2.3.1. "Invalid input"
 - 1.2.4. LIN <valid username> <extra param>
 - 1.2.4.1. "OK"
 - 1.3. Logged In
 - 1.3.1. "User already logged in"
2. LOU
- 2.1. Logged Out
 - 2.1.1. "No active login session"
 - 2.2. User Logged In
 - 2.2.1. LOU <input>
 - 2.2.1.1. "OK"
 - 2.2.2. LOU <no input>
 - 2.2.2.1. "OK"
 - 2.3. Admin Logged In
 - 2.3.1. LOU <input>
 - 2.3.1.1. "OK"
 - 2.3.2. LOU <no input>
 - 2.3.2.1. "OK"
3. CHP
- 3.1. Logged Out
 - 3.1.1. "No active login Session"
 - 3.2. User Logged In
 - 3.2.1. CHP <valid old password>
 - 3.2.1.1. Non-matching New Password:
 - 3.2.1.1.1. <Invalid characters>
 - 3.2.1.1.1.1. "Invalid password"
 - 3.2.1.1.2. <Valid characters>
 - 3.2.1.1.2.1. "Passwords do not match"
 - 3.2.1.2. Matching New Password:
 - 3.2.1.2.1. <Invalid characters>
 - 3.2.1.2.1.1. "Invalid Password"
 - 3.2.1.2.2. <Valid characters>
 - 3.2.1.2.2.1. "OK"
 - 3.2.2. CHP <invalid old password>
 - 3.2.2.1. "Incorrect old password"
 - 3.2.3. CHP <invalid characters>
 - 3.2.3.1. "Invalid password"
 - 3.3. Admin Logged In
 - 3.3.1. CHP <valid old password>

- 3.3.1.1. Non-matching New Password:
 - 3.3.1.1.1. <Invalid characters>
 - 3.3.1.1.1.1. "Invalid password"
 - 3.3.1.1.2. <Valid characters>
 - 3.3.1.1.2.1. "Passwords do not match"
- 3.3.1.2. Matching New Password:
 - 3.3.1.2.1. <Invalid characters>
 - 3.3.1.2.1.1. "Invalid Password"
 - 3.3.1.2.2. <Valid characters>
 - 3.3.1.2.2.1. "OK"
- 3.3.2. CHP <invalid old password>
 - 3.3.2.1. "Incorrect old password"
- 3.3.3. CHP <invalid characters>
 - 3.3.3.1. "Invalid password"

4. HLP

- 4.1. All User types
 - 4.1.1. HLP <unrecognized command>
 - 4.1.1.1. "Invalid Command"
 - 4.1.2. HLP <invalid characters>
 - 4.1.2.1. "Invalid input"
 - 4.1.3. HLP <recognized command>
 - 4.1.3.1. "OK"
 - 4.1.4. HLP <recognized command> <unrecognized command> ...
 - 4.1.4.1. "Invalid Command"
 - 4.1.5. HLP <recognized command> <recognized command> ...
 - 4.1.5.1. "OK"

5. ADU

- 5.1. No Log In
 - 5.1.1. "No active login session"
- 5.2. User Logged In
 - 5.2.1. "User not authorized"
- 5.3. Admin Logged In
 - 5.3.1. ADU <no user>
 - 5.3.1.1. "Invalid input"
 - 5.3.2. ADU <existing userID>
 - 5.3.2.1. "Account already exists OK"
 - 5.3.3. ADU <valid userID>
 - 5.3.3.1. "OK"
 - 5.3.4. ADU <invalid userID>

- 5.3.4.1. "Invalid user ID"
 - 5.4. ADU <invalid characters>
 - 5.4.1. "Invalid input"
 - 5.5. ADU <valid userID> <extra parameter>
 - 5.5.1. "Invalid input"
- 6. DEU
 - 6.1. No Active Login
 - 6.1.1. "No active login session"
 - 6.2. Admin Logged In
 - 6.2.1. DEU <no user>
 - 6.2.1.1. "Invalid UserID"
 - 6.2.2. DEU <existing userID>
 - 6.2.2.1. "OK"
 - 6.2.3. DEU <non existent user>
 - 6.2.3.1. "Account does not exist"
 - 6.2.4. DEU <invalid userid>
 - 6.3. User Logged In
 - 6.3.1. "User not authorized"
- 7. DAL
 - 7.1. No Active Log In
 - 7.1.1. "No active login session"
 - 7.2. User Logged In
 - 7.2.1. "User not authorized"
 - 7.3. Admin Logged In
 - 7.3.1. DAL <blank>
 - 7.3.1.1. "OK"
 - 7.3.2. DAL <any input>
 - 7.3.2.1. "OK"
- 8. DER (should be tested both in admin and in user)
 - 8.1. No Log In
 - 8.1.1. "No active login session"
 - 8.2. User Logged In
 - 8.2.1. DER <blank>
 - 8.2.1.1. "Invalid input"
 - 8.2.2. DER <valid recordID>
 - 8.2.2.1. "OK"
 - 8.2.3. DER <invalid recordID>

- 8.2.3.1. "Invalid input"
 - 8.2.4. DER <valid recordID> <extra param>
 - 8.2.4.1. "OK"
 - 8.2.5. DER <previously deleted recordID>
 - 8.2.5.1. "Record not found"
- 8.3. Admin Logged In
 - 8.3.1. "User not authorized"

9. ADR (should be tested both in admin and user)

- 9.1. No Log In
 - 9.1.1. "No active login session"
- 9.2. User Logged In
 - 9.2.1. ADR <blank>
 - 9.2.1.1. "Invalid input"
 - 9.2.2. ADR <invalid recordID>
 - 9.2.2.1. "Invalid input"
 - 9.2.3. ADR <duplicate recordID>
 - 9.2.3.1. "Record already exists"
 - 9.2.4. ADR <valid recordID>
 - 9.2.4.1. "OK"
 - 9.2.5. ADR <valid recordID> [param 1] [param 2] ...
 - 9.2.5.1. Should test with random combinations of random number of params
 - 9.2.5.1.1. Valid params
 - 9.2.5.1.1.1. "OK"
 - 9.2.5.1.2. Invalid params
 - 9.2.5.1.2.1. "Invalid input"
 - 9.2.5.1.3. Too many params
 - 9.2.5.1.3.1. "OK"
 - 9.2.5.1.4. Duplicate params
 - 9.2.5.1.4.1. "OK"
- 9.3. Admin Logged In
 - 9.3.1. "User not authorized"

10. EDR

- 10.1. No Active Log In
 - 10.1.1. "No active login session"
- 10.2. User Logged In
 - 10.2.1. EDR <blank>
 - 10.2.1.1. "Invalid input"

- 10.2.2. EDR <invalid recordID>
 - 10.2.2.1. "Invalid input"
- 10.2.3. EDR <duplicate recordID>
 - 10.2.3.1. "Record ID already exists"
- 10.2.4. EDR <valid recordID>
 - 10.2.4.1. "OK"
- 10.2.5. EDR <valid recordID> [param 1] [param 2] ...
 - 10.2.5.1. Should test with random combinations of random number of params
 - 10.2.5.1.1. Valid params
 - 10.2.5.1.1.1. "OK"
 - 10.2.5.1.2. Invalid params
 - 10.2.5.1.2.1. "Invalid input"
 - 10.2.5.1.3. Too many params
 - 10.2.5.1.3.1. "OK"
 - 10.2.5.1.4. Duplicate params
 - 10.2.5.1.4.1. "OK"
- 10.3. Admin Logged In
 - 10.3.1. "User not authorized"

11. RER

- 11.1. No Active Log In
 - 11.1.1. "No active login session"
- 11.2. User Logged In
 - 11.2.1. RER <blank>
 - 11.2.1.1. "Invalid input"
 - 11.2.2. RER <weird characters>
 - 11.2.2.1. "Invalid input"
 - 11.2.3. RER <invalid recordID>
 - 11.2.3.1. "Invalid recordID"
 - 11.2.4. RER <non-existing recordID>
 - 11.2.4.1. "RecordID not found"
 - 11.2.5. RER <valid recordID>
 - 11.2.5.1. "OK"
 - 11.2.6. RER <invalid recordID> <extra parameters>
 - 11.2.6.1. "Invalid input"
 - 11.2.7. RER <non-existing recordID> <extra parameters>
 - 11.2.7.1. "RecordID not found"
 - 11.2.8. RER <valid recordID> <extra parameters>
 - 11.2.8.1. Should be done with a variable amount of parameters
 - 11.2.8.1.1. Valid params
 - 11.2.8.1.1.1. "OK"

- 11.2.8.1.2. Invalid params
 - 11.2.8.1.2.1. "Invalid input"
 - 11.2.8.1.3. Too many params
 - 11.2.8.1.3.1. "OK"
 - 11.2.8.1.4. Duplicate params
 - 11.2.8.1.4.1. "OK"
 - 11.3. Admin Logged In
 - 11.3.1. "User not authorized"

12. IMD

- 12.1. No Active Log In
 - 12.1.1. "No active login session"
- 12.2. User Logged In
 - 12.2.1. IMD <blank>
 - 12.2.1.1. "Invalid input"
 - 12.2.2. IMD <weird characters>
 - 12.2.2.1. "Invalid input"
 - 12.2.3. IMD <invalid file path>
 - 12.2.3.1. "Input file invalid format"
 - 12.2.4. IMD <valid file path with corrupted file>
 - 12.2.4.1. Try with empty file, file with random bytes, and normal file with slight modifications
 - 12.2.4.1.1. "Invalid file"
 - 12.2.5. IMD <valid file path with normal file>
 - 12.2.5.1. "OK"
- 12.3. Admin Logged In
 - 12.3.1. "User not authorized"

13. EXD

- 13.1. No Active Log In
 - 13.1.1. "No active login session"
- 13.2. User Logged In
 - 13.2.1. EXD <blank>
 - 13.2.1.1. "Invalid input"
 - 13.2.2. EXD <weird characters>
 - 13.2.2.1. "Invalid input"
 - 13.2.3. EXD <invalid file path>
 - 13.2.3.1. "Output file invalid format"
 - 13.2.4. EXD <valid file path>
 - 13.2.4.1. "OK"
- 13.3. Admin Logged In

13.3.1. "User not authorized"

14. EXT

14.1. All Possible Users

14.1.1. EXT <blank>

14.1.1.1. "OK"

14.1.2. EXT <weird characters>

14.1.2.1. "OK"

15. Audit Log Overflow

Commonly used functions:

1. String getValidUserID()
2. void addUser(String userID, String password)
3. String getInvalidUserID()
4. String getPassword(String username)
5. void loginAdmin()
6. void loginUser()
7. int getRandom(int min, int max)