

# Test Cases

## Black-Box Test Cases

These test cases are defined based on the available documentation and execution of the program. The code was not inspected.

#	Test case (very brief description)	Preconditions (any required setup)	Test steps (steps executed during testing)	Expectation	Observation ("pass" or failure description)
1	Register	None	Type the username and password	<ul style="list-style-type: none"><li>- Registration successful on user input</li><li>- Avoiding blank user registration success</li></ul>	<ul style="list-style-type: none"><li>- Pass for user registration on user input</li><li>- Fail for blank user registration success</li></ul>
2	Login	User has to register before	<ul style="list-style-type: none"><li>- Type Strings, Numbers or both</li><li>- Enter blank input</li></ul>	<ul style="list-style-type: none"><li>- Success on strings and numbers</li><li>- Avoiding blank user login</li></ul>	<ul style="list-style-type: none"><li>- Fail for blank user login</li><li>- Pass for strings and numbers</li></ul>
3	Loading of password generator page	User has to log in	User register and login	<ul style="list-style-type: none"><li>- Closing of Login Page</li></ul>	Fail
4	Generate passwords with user-specified length.	User has entered a desired password length	<ul style="list-style-type: none"><li>- Login</li><li>- Types of Characters in Password any option to be selected</li><li>- user has entered a desired password length (eg: 16)</li></ul>	Generated password should have exactly 10 characters.	Pass
5	Include Options for Lowercase, Uppercase, Numbers, and Special Characters:	User has selected options for lowercase, uppercase, numbers, and special characters	<ul style="list-style-type: none"><li>- Select all character types.</li><li>- Generate a password.</li></ul>	Generated password should contain at least one character from each selected type.	Pass

6	Copy to Clipboard Functionality	Password has been generated.	<ul style="list-style-type: none"> <li>- Generate a password.</li> <li>- Copy password.</li> </ul>	The password should be copied to clipboard.	Pass
7	Storage of Password	None	<ul style="list-style-type: none"> <li>- Select the storage of password.</li> </ul>	Store the current password to storage	Fail (the current password is not saved and the file loads the same password for every user)
8	Languages	None	Select any languages (English, German, Spanish)	The text inside should change to any of those languages	Pass

## White-Box Test Cases

These additional test cases were defined during inspection of the code.

#	Test case (very brief description)	Preconditions (any required setup)	Test steps (steps executed during testing)	Expectation	Observation ("pass" or failure description)
1	testPasswordLength (Verify that the generated password has the correct length.)	None	Call generatePassword with a specified length (eg 10).	The generated password should have the expected length (10 characters).	Pass
2	testIncludeLowerCase (Confirm that the generated password includes at least one lowercase letter.)	None	Call generatePassword with the flag for lowercase letters set to true	The generated password should contain at least one lowercase letter.	Pass
3	testChangeLanguageToGerman (Change Language to German)	InfoGUI class is correctly initialized.	<ul style="list-style-type: none"> <li>- Call loadLanguage("de") to load the German language.</li> <li>- Call updateTexts() to update the displayed texts.</li> </ul>	Expected Passwort-Manager	Fail (Actual Tipps zur Benutzersicherheit)
4	testActionPerformedReturnButton (Verifies that clicking the "Return" button hides the InfoGUI)	InfoGUI is initiated	<ul style="list-style-type: none"> <li>- Create an instance of InfoGUI.</li> <li>- Simulate an action event for the "Return" button.</li> </ul>	The InfoGUI should no longer be visible.	Pass

5	testInitialColors (Ensures that the initial colors of various components match the expected values.)	The InfoGUI is instantiated with the "MiDeepBlue" color.	None	<ul style="list-style-type: none"> <li>- Content pane background color: RGB(30, 30, 50)</li> <li>- Text area background color: RGB(50, 50, 80)</li> <li>- Text area foreground color: RGB(255, 255, 255)</li> <li>- Label "TitleTips" color: RGB(255, 255, 255)</li> </ul>	Pass
6	testIncludeUpperCase (Verify that the generated password includes at least one uppercase letter.)	None	Call generatePassword with the flag for uppercase letters set to true.	The generated password should contain at least one uppercase letter.	Pass
7	Event Creation and Modification (Ensure that the Event class can be created and modified correctly.)	None	<ul style="list-style-type: none"> <li>- Create an instance of the Event class with initial program name ("Initial Program") and password ("InitialPassword123").</li> <li>- Modify the program name to "Updated Program" and the password to "UpdatedPassword567".</li> </ul>	<ul style="list-style-type: none"> <li>- The initial program name and password should match the provided values.</li> <li>- After modification, the program name should be "Updated Program" and the password should be "UpdatedPassword567".</li> <li>- The toString() method should return the expected string: "Program: Updated Program, Password: UpdatedPassword567".</li> </ul>	Pass
8	testIncludeNumbers (Verify that the generated password includes at least one number.)	None	Call generatePassword with the flag for numbers set to true.	Generated password should contain at least one numeric digit.	Pass
9	testIncludeSpecialCharacters (Verify that the generated password includes at least one special character.)	None	Call generatePassword with the flag for special characters set to true.	Generated password should contain at least one special character	Pass