Test suite for Smart Home System

Test execution video: ▶ Smart Home System Test Execution

Test case 1:

Steps:

1. Power up the device
2. Enter a wrong password 3 times

Expected Output:

The system should halt and freeze all interactions

Actual Output:

The system halts and freezes all interactions

Test case 2:

Steps:

1. Power up the device
2. Enter the correct password

Expected Output:

The system should print "You can access!" on LCD and start working

Actual Output:

The system prints "You can access!" on LCD and starts working

Test case 3:

Steps:

1. Power up the device
2. Enter the correct password
3. Test for temperatures more than 30C

Expected Output:

The system shall turn on the fan motor

Actual Output:

The system turns on the fan motor

Test case 4:

Steps:

1. Power up the device
2. Enter the correct password
3. Test for temperatures less than 30C

Expected Output:

The system shall turn off the fan motor

Actual Output:

The system turns off the fan motor

Test case 5:

Steps:

1. Power up the device
2. Enter the correct password
3. Test for LDR values more than 50%

Expected Output:

The system shall turn off the lamp

Actual Output:

The system turns off the lamp

Test case 6:

Steps:

1. Power up the device
2. Enter the correct password
3. Test for LDR values less than 50%

Expected Output:

The system shall turn on the lamp

Actual Output:

The system turns on the lamp

Test case 7:

Steps:

1. Power up the device
2. Enter the correct password
3. Set the temperature below 30C
4. Press on switch 1

Expected Output:

The system should manually turn on the motor fan

Actual Output:

The system manually turns on the motor fan

Test case 8:

Steps:

1. Power up the device
2. Enter the correct password
3. Set the LDR value above 50%
4. Press on switch 2

Expected Output:

The system should manually turn off the lamp

Actual Output:

The system turns off the lamp

Test case 9:

Steps:

1. Power up the device
2. Enter the correct password
3. Press on switch 1
4. Set the temperature above 30C
5. Release switch 1

Expected Output:

The motor fan should not change its state (should stay on)

Actual Output:

The motor fan stays on

Test case 10:

Steps:

1. Power up the device
2. Enter the correct password
3. Press on switch 2
4. Set the LDR value below 50%
5. Release switch 2

Expected Output:

The lamp should not change its state (should stay on)

Actual Output:

The lamp stays on

Test case 11:

Steps:

1. Power up the device
2. Enter the correct password
3. Press on switch 1
4. Set the temperature below 30C

Expected Output:

The motor fan should not change its state (should stay on)

Actual Output:

The motor fan stays on

Test case 12:

Steps:

1. Power up the device
2. Enter the correct password
3. Press on switch 2
4. Set the LDR value above 50%

Expected Output:

The lamp should not change its state (should stay on)

Actual Output:

The lamp stays on