Test Plan:

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| --- | --- | --- | --- |
| TC# | Preconditions | Expected Results | Actual Results/Test Data |
| TC001.01 | Application Paint Calculator is running on the local machine  Enter a value >= 1 in “Enter the number of rooms” text box  Click Submit button | Dimension Calculation window is launched with below fields:   * Room Number (pre-populated with value entered) * Length (text box) * Width (text box) * Height (text box) * Submit button |  |
| TC001.02 | TC001.01 is executed  For the below fields:  Length: Enter a value >=1  Width: Enter a value >=1  Height: Enter a value >=1  Click Submit button | Results! Window is launched with below fields:   * Room# (pre-populated from TC001.01 * Amount of Feet to Paint (displays “((Length \* 2) + (Width \* 2)) \* Height”) * Gallons Required (Displays a value as a factor of 1 Gallon required per 400ft of surface) * Total Gallons Required (Displays a value as a factor of 1 Gallon required per 400ft of surface) * Home button |  |
| TC002.01 | Application Paint Calculator is running on the local machine  Enter a value < 1 in “Enter the number of rooms” text box  Click Submit button | Dimension Calculation window is launched with below message:  Tool Tip message is displayed “Value must be greater than or equal to 1.” |  |
|  |  |  |  |

Issue identified in the application:

* Cannot handle a large input, ex: 100000.
* It returned http error code 500 “Internal Server Error

The server encountered an internal error and was unable to complete your request. Either the server is overloaded or there is an error in the application.”

Suggested Resolution:

* Provide an upper limit for number of rooms

Problems encountered while automation:

* Was not able to automate test scenario for tool tip error message.

Suggested Resolution:

* Error message can be defined with an attribute in the html element.

Possible to add a ‘title’ attribute by which the text can be read for validation.

I added code to test validation error message using the title attribute but it did not function since the attribute is either hidden or not present.

Explanation of Test Script/Framework:

* I created a POM framework with Page Factory.
* Gave Chrome as the browser, the file location would have to be updated. I provided a driver folder and also added the chromedriver.exe file in that folder.
* TestNG is used as the execution engine.
* I created a package uiActions to implement all possible actions on a UI by identifying all elements on the page.
* Test methods are written in the test/java folder under package name testPainCalculator.homepage
* Results can be viewed in TestNG reports and console.
* As a further work to what I have done, the Framework can/needs to be further extended to fully leverage:
  + Log4j logging,
  + Test data parameterization,
  + Emailing test run reports, etc.
  + As the test scripts get larger, @BeforeSuite can be created and options for multiple browser instantiation can be provided