

Feature: Calculate stock productivity

To manage and estimate my stock, I must be able to calculate and store stock data from a web-based application.

1. Login page

The web site should be secured. User can register for the site by email address. It will only be allowed to login by registered email address and password. The session timeout should be X minutes in case of inactivity.

2. Scenario: Calculate prices

When I login to the application, then I must see the first page with application title "Stock productivity calculator". It has two buttons- 1) Enter stock details 2) View calculated Result.

When I press button "Enter stock details" Then I must see the page with title "Enter stock details".

And I must be able to enter the following values:

Field	Value	Data type
Stock name	Apple	string
Price	2.00	decimal
Quantity	200	integer
Percentage	3.00	decimal
Years	10	integer

And I press button "Calculate" Then I must see the page with title "Calculation result".

And I must see the original input data:

Field	Value
Stock name	Apple
Price	2.00
Quantity	200
Percentage	3
Years	10

And list of stock values for each year as calculated result:

Year	Value
0	400.00
1	412.00
2	424.36
3	437.09
4	450.20
5	463.71

6	477.62
7	491.95
8	506.71
9	521.91
10	537.57

And the stock result data (both Input and result) must be saved into the xml/JSON file.

3. Scenario: View existing calculations

Given the system has already saved some calculated stocks like below:

Stock name	Price	Quantity	Percentage	Years
Apple	2.00	200	3.00	10
HP	3.00	50	4.00	5

When I press “View calculated Result”, then I must see page with application title "Stock productivity Result".

And I must see a table of saved stocks like above. When I click on the calculated line "Apple" then I must see the already calculated data for “Apple” stock like:

Year	Value
0	400.00
1	412.00
2	424.36
3	437.09
4	450.20
5	463.71
6	477.62
7	491.95
8	506.71
9	521.91
10	537.57

Technical stack Requirements:

1. Must be written in C#.
2. Use Asp.Net Web form/ Web API.
3. Use JSON/XML to store data.
4. Write a Unit test for the Stock productivity calculation.