Hometap QA Engineer Interview Exercise

Introduction

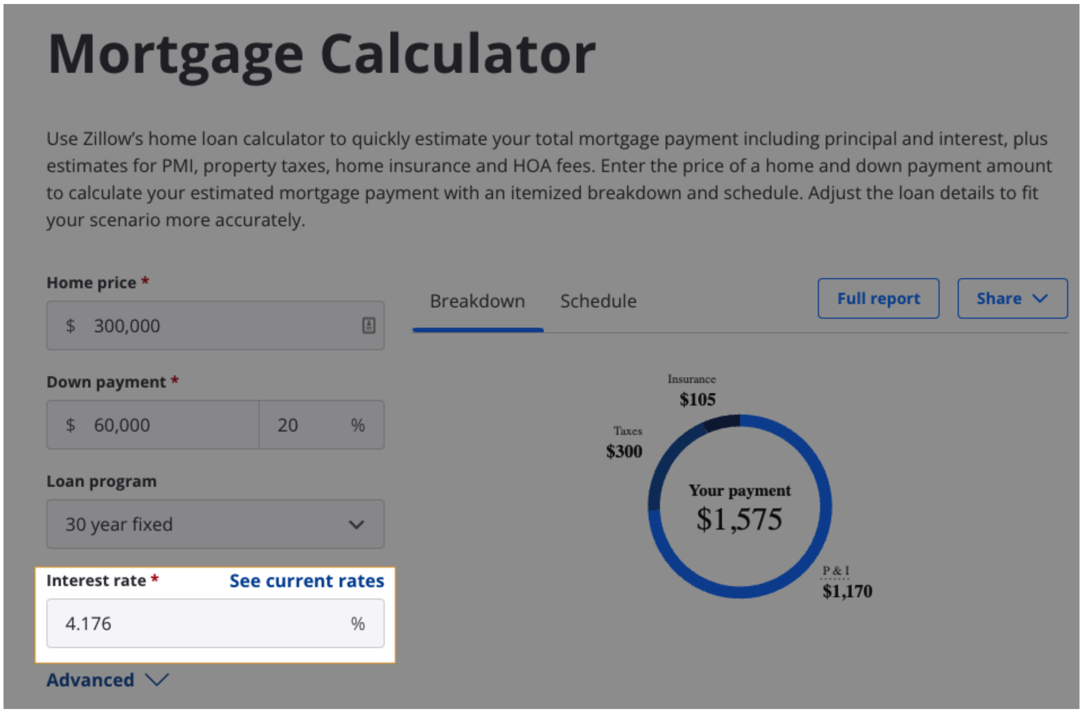
We would like to give you a chance to showcase your exceptional QA skills in this hands-on exercise.

Overview

We would like you to imagine you are a QA Engineer on a team who has been tasked with developing a Mortgage Calculator feature for a public website. For the purposes of this exercise we will use the Mortgage Calculator on Zillow.com for reference:

https://www.zillow.com/mortgage-calculator/

Imagine that a developer on your team has just completed implementation of the Interest Rate input field (highlighted in yellow below) and assigned it to you for QA.



Mortgage Calculator

Use Zillow's home loan calculator to quickly estimate your total mortgage payment including principal and interest, plus estimates for PMI, property taxes, home insurance and HOA fees. Enter the price of a home and down payment amount to calculate your estimated mortgage payment with an itemized breakdown and schedule. Adjust the loan details to fit your scenario more accurately.

Home price *
$ 300,000

Down payment *
$ 60,000 | 20 %

Loan program
30 year fixed

Interest rate * See current rates
4.176 %

Advanced

We would like to know how you would test this feature. Please complete the following:

1) **Test Plan**: Create a test plan document with test cases you would execute

2) **Test Automation**: Develop automation related to your test plan to the best of your knowledge/ability

Instructions

Part 1

Create a test plan document summarizing how and what you would test for this new feature

- This should be written documentation (you can use Google Docs/Google Sheets or provide a pdf)
- The test plan should at least cover and include the following:
    - Test Cases
        - Test description, test steps, and expected results for any tests you would be executing to test this feature
        - You should include different types of tests. Please label or categorize the test cases appropriately.
            i) **Acceptance Tests**: At least 5
                (1) Verifies the Acceptance Criteria listed in the User Story
            ii) **End to End Tests**: At least 1
                (1) Simulates a real user workflow from start to finish
            iii) **Negative Tests**: At least 1
                (1) Negative/Non-Happy-Path test case
        - It is okay for 1 test case to count for multiple categories as long as it is labeled accordingly
    - Questions/Testing Notes
        - A paragraph or notes/bullet points listing any questions you would have to anyone else on the team (PM, Developers, UX, etc.) before or during testing
    - Test Results
        - Execute your tests and update the status on your test plan document (Pass, Fail, Need More Information, etc.)
            i) Note - It is totally okay to have 100% passing tests (we realize this is a fully functioning highly-trafficked public website so the purpose isn't to find real bugs)
        - Summarize any additional feedback related to the design, UX, layout, or functionality

Part 2

Use any tool or test framework of your choice to automate at least two of your tests described in your test plan document

- For example: You could use Selenium with Pytest & Python or Cypress
- Anyone with access to your code should be able to run it and have the test run successfully
- Tests should interact with the UI
- Provide a link to a GitHub repository with your code and a README that explains how to run it
- In the README provide notes on how you might expand this automation code or considerations for the future or any problems you might run into as the tests scale