

# Challenge 1 for candidates having Trading background

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## Technical Challenge: Automated Exchange Trading Simulation with BDD Scenario (UI Automation)

### Description:

Your task is to design and implement an automated trading simulation system that provides the flexibility to configure inputs based on asset percentage or price movements. This system should simulate interactions with a trading exchange by placing orders based on predefined conditions, all achieved through UI automation framework. In addition, you will create a BDD scenario to test and verify the behaviour of your UI-based trading simulation system. You are not required to have in-depth knowledge of specific trading indicators or the financial domain; instead, you should create a scenario based on a smaller price movement and order placement by a specific value down/up, all driven through the exchange's user interface.

### Requirements:

#### 1. Automated Trading Scenario:

- Develop a script or program that simulates trading activities on the exchange through UI automation.
- Create a trading scenario that involves monitoring the market for a specified event, such as a price movement by a certain value

Example: BTC current price 35400. Price has moved either up or down by \$25 from current price. or a percentage 0.15% move has happened. Place a limit order at \$500 below initial price(35400) when price moved again say by \$20 or %0.1 cancel the order. If you want to simplify test, feel free to use public API to capture market data.

## **2. UI Automation:**

- Implement UI automation for the trading exchange. You should automate interactions with the exchange's user interface to monitor the market and place orders based on the predefined event. Use suitable UI automation tools or libraries to achieve this.

## **3. Order Placement:**

- Implement automated order placement through UI automation based on the predefined event. For example, if the market price moves down by \$50 or a specified percentage, your script should place a sell order through the exchange's UI.

## **4. BDD Scenario:**

- Create a BDD scenario that tests and verifies the behaviour of your UI-based trading simulation system. The BDD scenario should include clear steps, expected outcomes, and assertions for the defined behaviour, all interacted with through the exchange's UI.

## **5. Flexible Parameters:**

- Ensure that your UI-based solution allows for flexibility in defining parameters. Candidates should be able to configure key parameters through the exchange's UI, such as the price movement triggering an order, the order value, and simulation duration.

## **6. Multiple Iterations with Different Assets:**

- Perform multiple iterations of the UI-based trading simulation with different asset examples (e.g., BTC, ETH, XRP). Each iteration should demonstrate the flexibility to configure the scenario for different assets through the exchange's UI.

## **7. Documentation:**

- Provide clear and concise documentation on how to set up and run your UI-based trading simulation and the BDD scenario through the exchange's UI.
- Include a README file with clear instructions and examples on how to perform UI automation for this challenge.

**Submission:**

Please submit your solution in a version-controlled repository (e.g., GitHub) and provide access to the repository for review. Include a README file with clear instructions on how to set up and run your UI-based trading simulation and the BDD scenario through the exchange's UI.