# **Stocks Trading Challenge**

**Problem Statement**

Imagine that you have been given with INR 1 Lac rupees, to do trading on a group of Indian stocks. Write program in your preferred programming language that suggest the best entry and exit values from 2015 to 2022 for the group of stocks to maximize the profit.

**Rules:**

1. Stocks:

|  |
| --- |
| **Name of the Stock** |
| BHARTIARTL.NS |
| SBIN.NS |
| DRREDDY.NS |
| GSPL.NS |
| JSWSTEEL.NS |
| JSWENERGY.BO |
| RELIANCE.NS |
| YESBANK.NS |
| TATAMOTORS.NS |
| MINDTREE.NS |
| NTPC.NS |
| SAIL.BO |

1. Initial amount: - **INR 1 Lac**
2. Collect **Daily** historical data with **opening** and **closing** price from **Jan 2015** to **Dec 2022** online.
3. Multiple Entries and Exits are allowed.
   1. Ex: Suppose you bought and sold all units of a particular stock; you can again buy units of the same stock **N** number of times during your trading journey.
4. Partial Entry and exits are allowed.
   1. Ex: Suppose you have 100 units of a stock, either you can sell 100 altogether or you can sell part by part.
   2. Suppose you already bought some units of particular stocks on Feb 2015, you can buy more units on march 2015 provided you have enough money in your wallet
5. At any stage, your wallet amount shouldn’t fall below INR 0.
6. You should always Buy/Sell whole unit, no split units
   1. Ex: you can always buy/sell units multiple of 1s,
   2. No buying/Selling in Fractions such as 1.2 units,4.5 units etc..
7. Round off transactions amount to **2 decimal** places maximum.
8. You can buy and sell the stocks, Based on both open and close values
9. There will be 5% transaction charge when you are selling the stocks.

**Expected Output format: -**

1. Share an excel file with below output format.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Name of the stocks** | **Transaction Price** | **Event(Sell/Buy)** | **Total Units** |
| 2021-03-15 | SBIN.NS | Open | BUY | 1000 |
| 2021-03-17 | SBIN.NS | Close | SELL | 1000 |

1. Zip your code and send to us.