**DATA INGESTION**

# **FROM FINNHUB**

## **Steps**

* To extract data from Finnhub first of all login with subscribed email id on Finnhub login page.
* After successfully logging in the account you will receive the API key for the respected subscribed account.
* Now after getting the API key go to the API documentation page of finnhub.
* On this API documentation page go to the Stock Price option and in that option go to Candles(OHLCV).
* After clicking on Candles(OHLCV) click on the link available in Example.
* On clicking on the link available in Example, copy the URL it would be like this:  
  <https://www.finnhub.io/api/v1/stock/candle?symbol=AAPL&resolution=1&from=1693493346&to=1693752546&token=>(This token is the API key which you will get from the previous step).
* Copy this link and paste it on the postman in the get method.
* In the symbol section add the name of whichever stock symbol data you want,in the resolution part add the latency like you want data for (1 minute, 5 minute, 1 day, 1 year and so on), in the from and to add the dates from is the starting date and to is the ending date.
* Now these dates are to be entered in Epoch format and to convert date into Epoch format , the link is below:  
  https://www.epochconverter.com/

# **FROM ZERODHA**

## **Steps**

* To extract data from Zerodha first of all you have to create developer account on kite developer console and there create an app and activate it by paying 2000 Rupees which would be active for a month, follow the below link to complete this process end-to-end:  
  <https://youtu.be/5KivkJ9QhPc?feature=shared>
* After successfully following these steps provided in the link you will get the API key and API Secret copy this in your system for further usage.
* After extracting API Key and API Secret go to the Data ingestion(Zerodha) code files.
* In these code files go to Exp1.py and run the code till this line by commenting down the below code.  
  print("Login URL:", kite.login\_url()) # Open this URL, log in, and get the request\_token from the redirected URL.
* Now when you will run this code you will get a link in the terminal open that link.
* When you open this link in the URL section you will get a Request token, copy this and paste this token in the further part of the code.
* Now remove the commented part and run the entire code after copying the Request token.
* When you run the entire code you will get an Access token copy this Access token.
* Now after doing these steps got to the Kite API documentation.
* In this documentation go to Market quotes and Instruments.
* On this page click the second endpoint which will be this:

|  | [/instruments/:exchange](https://kite.trade/docs/connect/v3/market-quotes/#instruments) | Retrieve the CSV dump of instruments in the particular exchange |
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* On reaching there copy the link available and paste it on Postman in get method, the link would appear like this in documentation:  
  curl "https://api.kite.trade/quote?i=NSE:INFY" \
* -H "X-Kite-Version: 3" \
* -H "Authorization: token api\_key:access\_token"
* On running this link on postman you will get the Instrument token for whichever stock you require, copy this Instrument token and paste it in your system somewhere.
* Now, again go to API documentation, and go to Historical Candle data.
* Copy the link and again paste it on the postman in GET method, the link will be like this:  
  https://api.kite.trade/instruments/historical/5633/minute?from=2017-12-15+09:15:00&to=2017-12-15+09:20:00"
* -H "X-Kite-Version: 3" \
* -H "Authorization: token api\_key:access\_token" \
* In this link you have to add the instrument token which you extracted from the previous step, then the resolution that means for how much interval you need the data(1 minute, 5 minute,1 day and so on).
* In the from and to section add the start and end date. NOTE: At maximum you can fetch data for 3 months in one go.
* In the header section of the postman add the API\_Key:access token.
* Now save the response from the postman which would be in JSON Format.
* Now to convert this JSON Format data and csv format run the EXP3.py code.