In [1]:
```
# importing all required modules
import pandas as pd
import json
import requests
import time
import xlwings
import schedule
```

In [2]:
```
url_banknifty = "https://www.nseindia.com/api/option-chain-indices?symbol=BANKNIFTY"
headers = {
        "Accept-Encoding" : "gzip, deflate, br",
        "Accept-Language" : "en-US,en;q=0.9",
        "User-Agent" : "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/114.0.
    }
```

In [ ]:

```
def Retrieve_Option_BANKNIFTY():

    session = requests.Session()
    data = session.get(url_banknifty, headers = headers).json()  # retrieving data from above url
    expiry = '06-Jul-2023'
    ce_values = [d['CE'] for d in data['records']['data'] if "CE" in d and str(d['expiryDate'].lower()) == str(expiry)
    pe_values = [d['PE'] for d in data['records']['data'] if "PE" in d and str(d['expiryDate'].lower()) == str(expiry)
    ce_data = pd.DataFrame(ce_values)                              # storing all call option data into a dataframre
    pe_data = pd.DataFrame(pe_values)                              # storing all put option data into a dataframre
    ce_data = ce_data.sort_values(['strikePrice'])
    pe_data = pe_data.sort_values(['strikePrice'])

    a = ce_data['underlyingValue']
    underlying = a[0]

    for i in range(len(ce_data)):
        if ce_data['openInterest'][i] == ce_data['openInterest'].max():
            call_strike = ce_data['strikePrice'][i]
            ltp_call = ce_data['lastPrice'][i]

    for i in range(len(pe_data)):
        if pe_data['openInterest'][i] == pe_data['openInterest'].max():
            put_strike = pe_data['strikePrice'][i]
            ltp_put = pe_data['lastPrice'][i]

    resistance = call_strike + (ltp_call + ltp_put)
    support = put_strike - (ltp_call + ltp_put)


    excel_workbook = 'option_chain_analysis (Recovered).xlsx'    # exporting data to excel
    wb = xlwings.Book(excel_workbook)
    sheet1 = wb.sheets('BANKNIFTY')
    sheet1.range("B9").options(index=False,header=False).value = ce_data.drop(['strikePrice','expiryDate','underlying'
    sheet1.range("H9").options(index=False,header=False).value = pe_data.drop(['expiryDate','underlying','identifier',
    sheet1.range("H4").options(index=False,header=False).value = underlying
    sheet1.range("A4").options(index=False,header=False).value = expiry

    excel_workbook = 'option_chain_analysis (Recovered).xlsx'
    wb = xlwings.Book(excel_workbook)
    sheet1 = wb.sheets('BANKNIFTY_2')
    sheet1.range("A10").options(index=False,header=False).value = ce_data.drop(['expiryDate','underlying','identifier'
```

```
    sheet1.range("A90").options(index=False,header=False).value = pe_data.drop(['expiryDate','underlying','identifier'
    sheet1.range("D4").options(index=False,header=False).value = underlying
    sheet1.range("A4").options(index=False,header=False).value = expiry
    sheet1.range("N3").options(index=False,header=False).value = resistance
    sheet1.range("O3").options(index=False,header=False).value = support
    sheet1.range("D187").options(index=False,header=False).value = ce_data.drop(['expiryDate','underlying','identifier
    sheet1.range("F187").options(index=False,header=False).value = pe_data.drop(['expiryDate','underlying','identifier


while True:
    try:
        Retrieve_Option_BANKNIFTY()
        time.sleep(10)                # runs the code indefinitely every 10 seconds
    except:
        print('Problem')
```