pip install yfinance

pip install pandas

pip install matplotlib

import yfinance as yf

import pandas as pd

# Fetch data for Apple from Yahoo Finance

apple\_data = yf.download('AAPL', start='2020-01-01', end='2023-01-01')

# Display the data

print(apple\_data.head())

import yfinance as yf

# Define the ticker symbol

ticker\_symbol = "AAPL"

# Get the data

data = yf.Ticker(ticker\_symbol)

# Fetch historical market data for Apple from the last 5 years

df = data.history(period="5y")

# Print the data

print(df)

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import yfinance as yf

# Define the ticker symbol

ticker\_symbol = "AAPL"

# Fetch historical market data for Apple from the last year

data = yf.Ticker(ticker\_symbol)

df = data.history(period="1y")

df['Daily Return'] = df['Close'].pct\_change()

print(df[['Close', 'Daily Return']])

#moving average

import yfinance as yf

# Define the ticker symbol

ticker\_symbol = "AAPL"

# Fetch historical market data for Apple from the last year (or whatever period you're interested in)

data = yf.Ticker(ticker\_symbol)

df = data.history(period="1y")

df['30 Day MA'] = df['Close'].rolling(window=30).mean()

print(df[['Close', '30 Day MA']])

#stock portfolio with returns and risks

import yfinance as yf

import pandas as pd

# Define the tickers for our portfolio. Example: Apple, Microsoft, and Google.

tickers = ['AAPL', 'MSFT', 'GOOGL']

# Fetch historical market data for the last year

data = yf.download(tickers, period="1y")['Adj Close']

# Calculate daily returns

daily\_returns = data.pct\_change().dropna()

# Assign weights to the stocks in our portfolio

# Here, let's assume equal weights for simplicity: 1/3 each

weights = [1./3, 1./3, 1./3]

# Calculate the portfolio returns

portfolio\_returns = daily\_returns.dot(weights)

# Calculate the mean and standard deviation of the portfolio returns

mean\_returns = portfolio\_returns.mean()

std\_dev = portfolio\_returns.std()

print(f"Mean (Expected) Portfolio Return: {mean\_returns\*100:.2f}%")

print(f"Portfolio Risk (Standard Deviation): {std\_dev\*100:.2f}%")

#visualization

import yfinance as yf

import pandas as pd

import matplotlib.pyplot as plt

# Fetching data for the stocks

tickers = ['AAPL', 'MSFT', 'GOOGL']

data = yf.download(tickers, period="1y")['Adj Close']

# Calculate 30-day moving average for each stock

moving\_averages = data.rolling(window=30).mean()

# Plotting historical stock prices

data.plot(title="Historical Stock Prices", figsize=(14, 7))

# Plotting moving averages on the same graph

moving\_averages.plot(title="30-day Moving Averages", figsize=(14, 7), linestyle='--')

plt.legend([ticker + " Stock Price" for ticker in tickers] + [ticker + " 30-day MA" for ticker in tickers])

plt.show()