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import statistics as stats
from math import *
from pandas import *
from pandas_datareader import data
from matplotlib.pyplot import *

set_option ("display.max_rows", 20000)
set_option ("display.max_columns", 1000)
set_option ("display.width", 1000)

start_date = "2005-01-01"
end_date = "2020-03-13"
google_data = data.DataReader ("GOOG", "yahoo", start_date, end_date)

google_monthly_return = google_data['Adj
Close'].pct_change().groupby([google_data['Adj Close'].index.year, google_data['Adj
Close'].index.month]).mean()
google_monthly_return_list= []

for i in range(len(google_monthly_return)):
    google_monthly_return_list.append ({'month':google_monthly_return.index[i] [1],
'monthly_return': google_monthly_return[i]})

google_monthly_return_list = DataFrame (google_monthly_return_list,
columns=('month','monthly_return'))

google_monthly_return_list.boxplot(column='monthly_return', by='month')

print(google_monthly_return_list)

ax = gca()
labels = [item.get_text () for item in ax.get_xticklabels()]
labels = ['Jan','Feb','Mar','Apr','May','Jun','Jul','Aug','Sep','Oct','Nov','Dec']
ax.set_xticklabels (labels)
ax.set_ylabel('GOOG return')
tick_params (axis='both', which='major', labels=7)
title ("GOOG Monthly return 2005-2020")
suptitle("")
legend ()
show()

```