print hello world

In [ ]:
```
# write print("Hello World") in the block

print("Hello World")
```

While Loop

In [ ]:
```
# While(conditions):
#     do this
while True:
    print("Hello World")
```

For Loop

In [ ]:
```
for x in [1, 4, 5, 6]:
    print(x)
```

In [ ]:
```
for x in range(10):
    print(x)
# Python is 0 index useful when you wish to count the number of data frames.
```

conditional statements

In [ ]:
```
# if (condition1):
#    do this
# elif(condition2):
#    do that
# else:
#    then do this
```

In [ ]:
```
# libraries (download pandas numpy datetime)
# only
pip install pandas
pip install numpy
pip install yfinance
pip install datetime
pip install pandas_datareader
```

In [ ]:
```
import pandas as pd
import numpy as np
import yfinance as yf
import datetime as dt
from pandas_datareader import data as pdr
```

In [ ]:
```
yf.pdr_override()
stock = input("Enter a stock ticker symbol: ")
print(stock)
```

In [ ]:
```
startyear = 2019
startmonth = 1
startday = 1

# create a datetime object
start = dt.datetime(startyear, startmonth, startday)
# two date time objects, the start and the now
now = dt.datetime.now()
```

data frame

In [ ]:
```
df = pdr.get_data_yahoo(stock, start, now)
print(df)
```

In [ ]:
```
ma = 50
# str converts the ma which is an integer into a str and concatenates with the string "Sma_"
smaString = "Sma_"+str(ma)

# creates a new column to our data frame, but when cut out the first 4 rows
df[smaString] = df.iloc[:,4].rolling(window=ma).mean()
print(df)
```

In [ ]:
```
df = df.iloc[ma:]
print(df)
```

iterate each day to check if each row is above or below each moving average

In [ ]:
```
# each date is the index row of the date, use i to determine which values we are talking about.
for i in df.index:
    print(i)
```

In [ ]:

```
# prints the adjust float for each data set
for i in df.index:
    print(df.iloc[:,4][i])
```

In [ ]:

```
# OR

for i in df.index:
    print(df["Adj Close"][i])
```

In [ ]:

```
# Get the moving average

for i in df.index:
    print(df[smaString][i])
```

Write an IF statement to compare the two values

In [ ]:

```
# define the variable
numH = 0
numC = 0

for i in df.index:
    if(df["Adj Close"][i]>df[smaString][i]):
        print("The Close is higher")
        numH+=1
    else:
        print("The Close is lower")
        numC+=1

print(str(numH))
print(str(numC))
```

In [ ]:

In [ ]:

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