
A DAILY STOCK-MARKET ACTION SUMMARY

DOWNLOAD A ZIP FILE OF STOCK MOVES
FOR THE DAY

UNZIP THE FILE AND FIND THE BIGGEST
MOVERS AND MOST ACTIVELY
TRADED STOCKS

SUMMARIZE INTO AN EXCEL SPREADSHEET
WITH THE TOP 5 ACTIVE STOCKS

STEP 1: DOWNLOAD ZIP FROM THE INTERNET

JAVA HAS URL PROCESSING CLASSES TO
DOWNLOAD A FILE FROM AN INTERNET
URL AND SAVE IT TO A FILE
ON YOUR LOCAL DISK

BUT, THE NSE TRIES TO BLOCK
AUTOMATED SCRAPING BY PROGRAMS

SO, WE NEED TO JUMP THROUGH
A FEW HOOPS TO CONVINCE
THE NSE THAT ITS A HUMAN
DOWNLOADING THE FILE

STEP 2: UNZIP THE ZIP FILE AND GET A CSV FILE

MAKE SURE STEP 1 WORKED, AND
THE ZIP FILE ACTUALLY EXISTS

THEN OPEN THE ZIP FILE

WRITE CODE USING JAVA LIBRARIES
TO GET A LIST OF ALL FILES INSIDE
THIS ZIP FILE

KEEP A LIST OF EXTRACTED FILES
SO WE KNOW WHAT WE UNZIPPED

USE A FOR LOOP TO ITERATE THROUGH
EACH FILE WITHIN, AND EXTRACT
I.E. UNZIP IT

FINALLY,
CLOSE THE ZIP FILE

STEP 3: PROCESS THE CSV FILE, LINE-BY-LINE

CSV = COMMA-SEPARATED-VALUES

WE KNOW THE ZIP HAD ONLY 1 CSV FILE

OPEN THAT FILE

USE A CSV HANDLER LIBRARY
TO READ EACH LINE OF THAT FILE

SPLIT EACH LINE INTO WORDS,
AND SAVE THE WORDS WE CARE ABOUT

CLOSE THE FILE

STEP 4: ORGANIZE THE CONTENTS OF THE FILE INTO OBJECTS OF CLASSES WE CREATE

CREATE A CLASS TO REPRESENT ALL MARKET
ACTION ON A GIVEN DAY

CREATE ANOTHER (INNER) CLASS TO REPRESENT
MARKET ACTION FOR 1 STOCK ON 1 DAY WITH
MEMBER VARIABLES AS NEEDED

STOCK TICKER

% CHANGE TODAY

\$ VALUE TRADED TODAY

OBJECT OF THE OUTER CLASS WILL HOLD A
COLLECTION OF OBJECTS OF THE INNER CLASS

COMPARATORS

THESE ARE OBJECTS WHOSE SOLE PURPOSE IS TO COMPARE 2 OBJECTS OF A SPECIFIC CLASS, AND RETURN 1, 0, OR -1 DEPENDING ON WHETHER THE FIRST OR THE SECOND IS LARGER.

COMPARATOR OBJECTS IMPLEMENT

COMPARATORS CAN BE SET UP TO COMPARE 2 OBJECTS OF ANY CLASS YOU CHOOSE, USING ANY LOGIC YOU CHOOSE

THE COMPARATOR INTERFACE

<TEMPLATE
PARAMETER>

LISTS OF OBJECTS CAN BE SORTED BY

MAGIC

SIMPLY USE THE `COLLECTIONS.SORT` STATIC METHOD, WITH AN INSTANCE OF THE RIGHT COMPARATOR CLASS

`COLLECTIONS` IS A JAVA BUILT-IN CLASS, AND `COLLECTIONS.SORT` IS A STATIC MEMBER FUNCTION OF THAT CLASS

REMEMBER THAT ALL JAVA COLLECTIONS (`LIST`, `MAP`) INHERIT FROM `COLLECTION`. `ARRAYLISTS` AND `HASHMAPS` IN TURN INHERIT FROM `LIST` AND `MAP` RESPECTIVELY

STEP 5: CREATE THE EXCEL FILE

APACHE, AN OPEN-SOURCE POWERHOUSE,
HAS CREATED JAVA LIBRARIES (CALLED "JARS")
TO WORK WITH EXCEL FILES IN JAVA

POI

OPEN OR CREATE AN EXCEL FILE

READ OR WRITE CELLS

CLOSE THE EXCEL FILE

POI HAS A SET OF CLASSES (CALLED AN
"OBJECT MODEL") TO WORK WITH EXCEL