How the Free Yahoo Finance API Works

Yahoo finance provides a great and simple way to download free stock quotes. This service returns stock data in a CSV. (comma delimited format, you can just open it in Excel if you like)

The service Yahoo finance provides for free stock quotes is REST based. (love REST based stuff) So all you need to do is assemble the URL you want and it will give you the data your looking for.

The API lets you specify multiple symbols to download with a maximum of 200 per call. (You can make multiple calls, but if you call too fast it will lock your IP so be warned)

How to call the free Yahoo Finance API

The base url your going to call is http://finance.yahoo.com/d/quotes.csv

Then you add a ?s= and the stock symbols your interested in such as APPL, GOOG and MSFT like so

http://finance.yahoo.com/d/quotes.csv?s=AAPL+GOOG+MSFT

Then you specify the info you want. There is a large list of stuff you can specify, just look at the list below for more info.

http://finance.yahoo.com/d/quotes.csv?s=AAPL+GOOG+MSFT&f=nab

This will get the name of the stock, the ask price and bid price (the “nab” = name,ask and bid)

Financial Data you can Download

|  |  |
| --- | --- |
| **Pricing** | **Dividends** |
| **a**: Ask | **y**: Dividend Yield |
| **b**: Bid | **d**: Dividend per Share |
| **b2**: Ask (Realtime) | **r1**: Dividend Pay Date |
| **b3**: Bid (Realtime) | **q**: Ex-Dividend Date |
| **p**: Previous Close |  |
| **o**: Open |  |
| **Date** | |
| **c1**: Change | **d1**: Last Trade Date |
| **c**: Change & Percent Change | **d2**: Trade Date |
| **c6**: Change (Realtime) | **t1**: Last Trade Time |
| **k2**: Change Percent (Realtime) |  |
| **p2**: Change in Percent |  |
| **Averages** | |
| **c8**: After Hours Change (Realtime) | **m5**: Change From 200 Day Moving Average |
| **c3**: Commission | **m6**: Percent Change From 200 Day Moving Average |
| **g**: Day’s Low | **m7**: Change From 50 Day Moving Average |
| **h**: Day’s High | **m8**: Percent Change From 50 Day Moving Average |
| **k1**: Last Trade (Realtime) With Time | **m3**: 50 Day Moving Average |
| **l**: Last Trade (With Time) | **m4**: 200 Day Moving Average |
| **l1**: Last Trade (Price Only) |  |
| **t8**: 1 yr Target Price |  |
| **Misc** | |
| **w1**: Day’s Value Change | **g1**: Holdings Gain Percent |
| **w4**: Day’s Value Change (Realtime) | **g3**: Annualized Gain |
| **p1**: Price Paid | **g4**: Holdings Gain |
| **m**: Day’s Range | **g5**: Holdings Gain Percent (Realtime) |
| **m2**: Day’s Range (Realtime) | **g6**: Holdings Gain (Realtime) |
| **52 Week Pricing** | **Symbol Info** |
| **k**: 52 Week High | **v**: More Info |
| **j**: 52 week Low | **j1**: Market Capitalization |
| **j5**: Change From 52 Week Low | **j3**: Market Cap (Realtime) |
| **k4**: Change From 52 week High | **f6**: Float Shares |
| **j6**: Percent Change From 52 week Low | **n**: Name |
| **k5**: Percent Change From 52 week High | **n4**: Notes |
| **w**: 52 week Range | **s**: Symbol |
|  | **s1**: Shares Owned |
|  | **x**: Stock Exchange |
|  | **j2**: Shares Outstanding |
| **Volume** | |
| **v**: Volume |  |
| **a5**: Ask Size |  |
| **b6**: Bid Size | **Misc** |
| **k3**: Last Trade Size | **t7**: Ticker Trend |
| **a2**: Average Daily Volume | **t6**: Trade Links |
|  | **i5**: Order Book (Realtime) |
| **Ratios** | **l2**: High Limit |
| **e**: Earnings per Share | **l3**: Low Limit |
| **e7**: EPS Estimate Current Year | **v1**: Holdings Value |
| **e8**: EPS Estimate Next Year | **v7**: Holdings Value (Realtime) |
| **e9**: EPS Estimate Next Quarter | **s6** Revenue |
| **b4**: Book Value |  |
| **j4**: EBITDA |  |
| **p5**: Price / Sales |  |
| **p6**: Price / Book |  |
| **r**: P/E Ratio |  |
| **r2**: P/E Ratio (Realtime) |  |
| **r5**: PEG Ratio |  |
| **r6**: Price / EPS Estimate Current Year |  |
| **r7**: Price / EPS Estimate Next Year |  |
| **s7**: Short Ratio |  |

Getting Stock Data in C#

Since this is a REST based finance API, to get the data using C# is easy. You can simply use a WebClient.DownloadString(myurl) to get the data. Once you get the data, it’s also easy to parse being a simple CSV format.

[Download Source Code](http://www.jarloo.com/downloads/YahooFinanceCSV.zip)

Here is a quick example of how you can use the free Yahoo Finance API in your C# code.

**Application Entry Point (main)**

[?](http://www.jarloo.com/yahoo_finance/)

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30 | using System;  using System.Collections.Generic;  using System.Net;  using jarloo;    namespace Jarloo  {      internal class Program      {          private static void Main(string[] args)          {              string csvData;                using (WebClient web = new WebClient())              {                  csvData = web.DownloadString("<http://finance.yahoo.com/d/quotes.csv?s=AAPL>+GOOG+MSFT&f=snbaopl1");              }                List<Price> prices = YahooFinance.Parse(csvData);                foreach (Price price in prices)              {                  Console.WriteLine(string.Format("{0} ({1})  Bid:{2} Offer:{3} Last:{4} Open: {5} PreviousClose:{6}",price.Name,price.Symbol,price.Bid,price.Ask,price.Last,price.Open,price.PreviousClose));              }                Console.Read();            }      }  } |

**Parsing Class and State Bag**

[?](http://www.jarloo.com/yahoo_finance/)

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42  43  44  45  46 | using System;  using System.Collections.Generic;    namespace jarloo  {      public static class YahooFinance      {          public static List<Price> Parse(string csvData)          {              List<Price> prices = new List<Price>();                string[] rows = csvData.Replace("\r", "").Split('\n');                foreach (string row in rows)              {                  if (string.IsNullOrEmpty(row)) continue;                    string[] cols = row.Split(',');                    Price p = new Price();                  p.Symbol = cols[0];                  p.Name = cols[1];                  p.Bid = Convert.ToDecimal(cols[2]);                  p.Ask = Convert.ToDecimal(cols[3]);                  p.Open = Convert.ToDecimal(cols[4]);                  p.PreviousClose = Convert.ToDecimal(cols[5]);                  p.Last = Convert.ToDecimal(cols[6]);                    prices.Add(p);              }                return prices;          }      }        public class Price      {          public string Symbol { get; set; }          public string Name { get; set; }          public decimal Bid { get; set; }          public decimal Ask { get; set; }          public decimal Open { get; set; }          public decimal PreviousClose { get; set; }          public decimal Last { get; set; }      }  } |

Exchanges and Yahoo

Had lots of people asking how to get stuff from Non-US exchanges. Being a good Canadian myself I’ve been looking into it, and here is the master Yahoo Exhcange List for all your data scraping goodness!

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Country | Exchange | Suffix | Delay | Data Provider |
| United States of America | American Stock Exchange | N/A | 15 min | Direct from Exchange |
| United States of America | BATS Exchange | N/A | Real-time | Direct from Exchange |
| United States of America | Chicago Board of Trade | .CBT | 10 min | Interactive Data Real-Time Services |
| United States of America | Chicago Mercantile Exchange | .CME | 10 min | Interactive Data Real-Time Services |
| United States of America | Dow Jones Indexes | N/A | Real-time | Interactive Data Real-Time Services |
| United States of America | NASDAQ Stock Exchange | N/A | 15 min | Direct from Exchange |
| United States of America | New York Board of Trade | .NYB | 30 min | Interactive Data Real-Time Services |
| United States of America | New York Commodities Exchange | .CMX | 30 min | Interactive Data Real-Time Services |
| United States of America | New York Mercantile Exchange | .NYM | 30 min | Interactive Data Real-Time Services |
| United States of America | New York Stock Exchange | N/A | 15 min | Direct from Exchange |
| United States of America | OTC Bulletin Board Market | .OB | 20 min | Direct from Exchange |
| United States of America | Pink Sheets | .PK | 15 min | Direct from Exchange |
| United States of America | S & P Indices | N/A | Real-time | Interactive Data Real-Time Services |
| Argentina | Buenos Aires Stock Exchange | .BA | 30 min | Interactive Data Real-Time Services |
| Austria | Vienna Stock Exchange | .VI | 15 min | Telekurs |
| Australia | Australian Stock Exchange | .AX | 20 min | Interactive Data Real-Time Services |
| Belgium | Brussels Stocks | .BR | 15 min |  |
| Brazil | BOVESPA – Sao Paolo Stock Exchange | .SA | 15 min | Interactive Data Real-Time Services |
| Canada | Toronto Stock Exchange | .TO | 15 min | Interactive Data Real-Time Services |
| Canada | TSX Venture Exchange | .V | 15 min | Interactive Data Real-Time Services |
| Chile | Santiago Stock Exchange | .SN | 15 min | Interactive Data Real-Time Services |
| China | Shanghai Stock Exchange | .SS | 30 min | Interactive Data Real-Time Services |
| China | Shenzhen Stock Exchange | .SZ | 30 min | Interactive Data Real-Time Services |
| Denmark | Copenhagen Stock Exchange | .CO | 15 min | Telekurs |
| France | Euronext | .NX | 15 min | Telekurs |
| France | Paris Stock Exchange | .PA | 15 min | Telekurs |
| Germany | Berlin Stock Exchange | .BE | 15 min | Telekurs |
| Germany | Bremen Stock Exchange | .BM | 15 min | Telekurs |
| Germany | Dusseldorf Stock Exchange | .DU | 15 min | Telekurs |
| Germany | Frankfurt Stock Exchange | .F | 15 min | Telekurs |
| Germany | Hamburg Stock Exchange | .HM | 15 min | Telekurs |
| Germany | Hanover Stock Exchange | .HA | 15 min | Telekurs |
| Germany | Munich Stock Exchange | .MU | 15 min | Telekurs |
| Germany | Stuttgart Stock Exchange | .SG | 15 min | Telekurs |
| Germany | XETRA Stock Exchange | .DE | 15 min | Telekurs |
| Hong Kong | Hong Kong Stock Exchange | .HK | 15 min | Interactive Data Real-Time Services |
| India | Bombay Stock Exchange | .BO | 15 min | Interactive Data Real-Time Services |
| India | National Stock Exchange of India | .NS | 15 min | National Stock Exchange of India |
| Indonesia | Jakarta Stock Exchange | .JK | 10 min | Interactive Data Real-Time Services |
| Israel | Tel Aviv Stock Exchange | .TA | 20 min | Telekurs |
| Italy | Milan Stock Exchange | .MI | 20 min | Telekurs |
| Japan | Nikkei Indices | N/A | 30 min | Interactive Data Real-Time Services |
| Mexico | Mexico Stock Exchange | .MX | 20 min | Telekurs |
| Netherlands | Amsterdam Stock Exchange | .AS | 15 min | Telekurs |
| New Zealand | New Zealand Stock Exchange | .NZ | 20 min | Interactive Data Real-Time Services |
| Norway | Oslo Stock Exchange | .OL | 15 min | Telekurs |
| Portugal | Lisbon Stocks | .LS | 15 min |  |
| Singapore | Singapore Stock Exchange | .SI | 20 min | Interactive Data Real-Time Services |
| South Korea | Korea Stock Exchange | .KS | 20 min | Interactive Data Real-Time Services |
| South Korea | KOSDAQ | .KQ | 20 min | Interactive Data Real-Time Services |
| Spain | Barcelona Stock Exchange | .BC | 15 min | Telekurs |
| Spain | Bilbao Stock Exchange | .BI | 15 min | Telekurs |
| Spain | Madrid Fixed Income Market | .MF | 15 min | Telekurs |
| Spain | Madrid SE C.A.T.S. | .MC | 15 min | Telekurs |
| Spain | Madrid Stock Exchange | .MA | 15 min | Telekurs |
| Sweden | Stockholm Stock Exchange | .ST | 15 min | Telekurs |
| Switzerland | Swiss Exchange | .SW | 30 min | Telekurs |
| Taiwan | Taiwan OTC Exchange | .TWO | 20 min | Interactive Data Real-Time Services |
| Taiwan | Taiwan Stock Exchange | .TW | 20 min | Interactive Data Real-Time Services |
| United Kingdom | FTSE Indices | N/A | 15 min | Telekurs |
| United Kingdom | London Stock Exchange | .L | 20 min | Telekurs |