

Forward School

Program Code: J620-002-4:2020

Program Name: FRONT-END SOFTWARE DEVELOPMENT

Title : Introduction of BeautifulSoup - Part 2

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Introduction : learning beautiful soup function

Conclusion : Learned how to use beautiful soup

P13 - Introduction of BeautifulSoup - Part 2

BeautifulSoup is a library for **parsing HTML and XML documents**.

Requests with **BeautifulSoup** (a parsing library) are the best package tools for **small and quick web scraping**.

<https://www.crummy.com/software/BeautifulSoup/>
(<https://www.crummy.com/software/BeautifulSoup/>)

<https://www.crummy.com/software/BeautifulSoup/bs4/doc/>
(<https://www.crummy.com/software/BeautifulSoup/bs4/doc/>)

Installation

pip3 install bs4

Methods

Find_All

Find

```
In [2]: from bs4 import BeautifulSoup
import requests
```

```
In [13]: #page = requests.get("https://www.ebay.com.my/sch/Car-Truck-Parts/6030/i.html?_f
page = requests.get("https://www.ebay.com.my/sch/Car-Truck-Parts/6030/i.html?_f
page.status_code
```

Out[13]: 200

```
In [14]: page.content
```

```
Out[14]: b'<!DOCTYPE html><!--[if IE 9]><html class="ie9" lang="en"><![endif]>--><!--
[if gt IE 9]><!--><html lang="en"><!--<![endif]>--><!--M#s0-2--><noscript cl
ass=x-page-config></noscript><!--M/--><head><meta http-equiv=X-UA-Compatibl
e content=IE=edge><script>"use strict";if(window.PerformanceObserver&&perfo
rmance&&performance.mark&&performance.getEntriesByName){window.SRP=window.S
RP||{};var paintObserver=new window.PerformanceObserver((function(e){var r=
e.getEntries();if(r.sort((function(e,r){return e.startTime-r.startTime})),r
&&!(r.length<2)){var n=r[1].startTime;window.SRP.TTI_TIMER={lastInteractive
Window:n};var t=new window.PerformanceObserver((function(e){for(var r=e.get
Entries(),i=0,a=r.length;i<a;i++)r[i].startTime-n>=5e3&&(window.SRP.TTI_TIM
ER.timeToInteract=n,t.disconnect()),n=r[i].startTime+r[i].duration,window.S
RP.TTI_TIMER.lastInteractiveWindow=n}));t.observe({entryTypes:["longtas
k"]}),paintObserver.disconnect()}}));paintObserver.observe({entryTypes:["pa
int"]})}};</script><meta name="description" content="Find Proton from a vast
selection of Car & Truck Parts & Accessories. Get great deals on eB
ay!" /><title>Proton in Car & Truck Parts & Accessories | eBay</tit
le><meta name="referrer" content="unsafe-url" /><meta name="y_key" content
="cdcbaefb6bbb375f" /><meta name="msvalidate.01" content="34E98E6F27109BE1A
9DCF19658EEEE33" /><link rel="preconnect" href="https://ir.ebaystatic.com"
/><link rel="preconnect" href="https://www.ebay.com.my/sch/Car-Truck-Parts-A
```

```
In [15]: soup = BeautifulSoup(page.content, 'html.parser')
        soup
```

```
Out[15]: <!DOCTYPE html>
<!--[if IE 9]><html class="ie9" lang="en"><![endif]--><!--[if gt IE 9]><!--
><html lang="en"><!--<![endif]--><!--M#s0-2--><noscript class="x-page-confi
g"></noscript><!--M/--><head><meta content="IE=edge" http-equiv="X-UA-Compa
tible"/><script>"use strict";if(window.PerformanceObserver&&performance&&pe
rformance.mark&&performance.getEntriesByName){window.SRP=window.SRP||{};var
paintObserver=new window.PerformanceObserver((function(e){var r=e.getEntrie
s();if(r.sort((function(e,r){return e.startTime-r.startTime})),r&&!(r.lengt
h<2)){var n=r[1].startTime;window.SRP.TTI_TIMER={lastInteractiveWindow:n};v
ar t=new window.PerformanceObserver((function(e){for(var r=e.getEntries(),i
=0,a=r.length;i<a;i++)r[i].startTime-n>=5e3&&(window.SRP.TTI_TIMER.timeToIn
teract=n,t.disconnect()),n=r[i].startTime+r[i].duration,window.SRP.TTI_TIME
R.lastInteractiveWindow=n}));t.observe({entryTypes:["longtask"]}),paintObse
rver.disconnect()}}));paintObserver.observe({entryTypes:["paint"]}});</scri
pt><meta content="Find Proton from a vast selection of Car & Truck Part
s & Accessories. Get great deals on eBay!" name="description"><title>Pr
oton in Car & Truck Parts & Accessories | eBay</title><meta content
="unsafe-url" name="referrer"/><meta content="cdcbaefb6bbb375f" name="y_ke
y"/><meta content="34E98E6F27109BE1A9DCF19658EEEE33" name="msvalidate.01"/>
```

Observe that the downloaded page

```
In [16]: print(soup.prettify())
```

```
<!DOCTYPE html>
<!--[if IE 9]><html class="ie9" lang="en"><![endif]-->
<!--[if gt IE 9]><!-->
<html lang="en">
  <!--<![endif]-->
  <!--M#s0-2-->
  <noscript class="x-page-config">
  </noscript>
  <!--M/-->
  <head>
    <meta content="IE=edge" http-equiv="X-UA-Compatible"/>
    <script>
      "use strict";if(window.PerformanceObserver&&performance&&performance.mar
k&&performance.getEntriesByName){window.SRP=window.SRP||{};var paintObserve
r=new window.PerformanceObserver((function(e){var r=e.getEntries();if(r.sor
t((function(e,r){return e.startTime-r.startTime})),r&&!(r.length<2)){var n=
r[1].startTime;window.SRP.TTI_TIMER={lastInteractiveWindow:n};var t=new win
dow.PerformanceObserver((function(e){for(var r=e.getEntries(),i=0,a=r.lengt
h;i<a;i++)r[i].startTime-n>=5e3&&(window.SRP.TTI_TIMER.timeToInteract=n,t.d
```

Observe that the HTML doc is now a human readable document

In [17]: `list(soup.children)`

```
Out[17]: ['html',
  '[if IE 9]><html class="ie9" lang="en"><![endif]',
  '[if gt IE 9]><!',
  '<html lang="en"><!--<![endif]--><!--M#s0-2--><noscript class="x-page-confi
g"></noscript><!--M/--><head><meta content="IE=edge" http-equiv="X-UA-Compa
tible"/><script>"use strict";if(window.PerformanceObserver&&performance&&pe
rformance.mark&&performance.getEntriesByName){window.SRP=window.SRP||{};var
paintObserver=new window.PerformanceObserver((function(e){var r=e.getEntrie
s();if(r.sort((function(e,r){return e.startTime-r.startTime})),r&&!(r.lengt
h<2)){var n=r[1].startTime;window.SRP.TTI_TIMER={lastInteractiveWindow:n};v
ar t=new window.PerformanceObserver((function(e){for(var r=e.getEntries(),i
=0,a=r.length;i<a;i++)r[i].startTime-n>=5e3&&(window.SRP.TTI_TIMER.timeToIn
teract=n,t.disconnect()),n=r[i].startTime+r[i].duration,window.SRP.TTI_TIME
R.lastInteractiveWindow=n}));t.observe({entryTypes:["longtask"]}),paintObse
rver.disconnect()}));paintObserver.observe({entryTypes:["paint"]});</scrip
t><meta content="Find Proton from a vast selection of Car & Truck Part
s & Accessories. Get great deals on eBay!" name="description"><title>Pr
oton in Car & Truck Parts & Accessories | eBay</title><meta content
="unsafe-url" name="referrer"/><meta content="cdcbaefb6bbb375f" name="y_ke
">...</html>']
```

Now go back to Ebay Page and observe the listing for repeatable items

Observe the listed items and corresponding HTML tags

We want to grab all the product listed on the page

In [19]: `soup_list = soup.findAll("li", attrs={"class": "s-item s-item__pl-on-bottom"})`
`soup_list`

```
Out[19]: [<li class="s-item s-item__pl-on-bottom" data-view="mi:1686|iid:1" data-vie
wport='{"trackableId":"01GDF2P4GS7EBZ8M2AWN707B"}' id=""><div class="s-item
__wrapper clearfix"><!--F#f_0--><div class="s-item__image-section"><div cla
ss="s-item__image"><a _sp="" aria-hidden="true" data-carousel-tabindex="-1"
data-interactions='[{"actionKind":"NAVSRC","interaction":"wwFVrK2vRE0lhQY0M
REUzME5KNVY2VE1XNkJEMTUAAG3NDAwDE5BVlNSQwA="}]' data-s-mpcp475='{"eventFam
ily":"LST","eventAction":"ACTN","actionKind":"NAVSRC","actionKinds":["NAVSR
C"],"operationId":"","flushImmediately":false,"eventProperty":{"trackableId
":"01GDF2P4GS7EBZ8M2AWN707B","interaction":"wwFVrK2vRE0lhQY0MREUzME5KNVY2V
E1XNkJEMTUAAG3NDAwDE5BVlNSQwA="}}' href="https://ebay.com/itm/123456?hash=
item28caef0a3a:g:E3kAAOSwlGJiMikD&amdata=enc%3AAQAHAAAAJoWxGf0hxNZspTm
hb8%2FTJCCurAWCHuXJ2Xi3S9cwXL6BX04zSEiVaDMCvsUbApftgXEAHGJU1ZGugZO%2FnW1U7G
b6vgoL%2BmXlqCbLkwoZFF3AUAK8YvJ5B4%2BnhFA7ID4dXPYs4jjExEnN5SR2g1mQe7QtLkmG
t%2FZ%2FbH2W62cXPuKbf550ExbnBP02QJyZTXyCuw5KVkMdFMDuoB4p3FwJKcSPzez5kyQyVjy
iIq6PB2q%7Ctkp%3ABlBMULq7kqyXYA" tabindex="-1" target="_blank"><div class
="s-item__image-wrapper image-treatment"><div class="s-item__wrapper clearfix"><!--F#f_0--><div class="s-item__image-section"><div class="s-item__image"><a _sp="" aria-hidden="true" data-carousel-tabindex="-1" data-interactions='[{\"actionKind\":\"NAVSRC\",\"interaction\":\"wwFVrK2vRE0lhQY0MREUzME5KNVY2VE1XNkJEMTUAAG3NDAwDE5BV1NSQwA=\"}]' data-s-mpcp475='{\"eventFamily\":\"LST\",\"eventAction\":\"ACTN\",\"actionKind\":\"NAVSRC\",\"actionKinds\":[\"NAVSRC\"],\"operationId\":\"\",\"flushImmediately\":false,\"eventProperty\":{\"trackableId\":\"01GDF2P4GS7EBZ8M2AWN707B\",\"interaction\":\"wwFVrK2vRE0lhQY0MREUzME5KNVY2VE1XNkJEMTUAAG3NDAwDE5BV1NSQwA=\"}}' href="https://ebay.com/itm/123456?hash=item28caef0a3a:g:E3kAAOSw1GJiMikD&amdata=enc%3AAQAHAHAASJowXGf0hxNZspTmh8%2FTJCCurAWCHuXJ2Xi3S9cwXL6BX04zSEiVaDMCvsUbApftgXEAHGJU1ZGugZ0%2FnW1U7Gb6vgoL%2BmXlqCbLkwoZfF3AUAK8YvJ5B4%2BnhFA7ID4dpxYs4jjExEnN5SR2g1mQe7QtLkmGt%2FZ%2FbH2W62cXPuKbf550ExbnBP02QJyZTXyCuw5KVkMdFMDuoB4p3FwJKcSPzez5kyQyVjyiIq6PB2q%7Ctkp%3AB1BMULq7kqyXYA" tabindex="-1" target="_blank"><div class="s-item__image-wrapper image-treatment"></div></a></div></div><div class="s-item__info clearfix"><a _sp="" class="s-item__link" data-interactions='[{\"actionKind\":\"NAVSRC\",\"interaction\":\"wwFVrK2vRE0lhQY0MREUzME5KNVY2VE1XNkJEMTUAAG3NDAwDE5BV1NSQwA=\"}]' data-s-mpcp475='{\"eventFamily\":\"LST\",\"eventAction\":\"ACTN\",\"actionKind\":\"NAVSRC\",\"actionKinds\":[\"NAVSRC\"],\"operationId\":\"\",\"flushImmediately\":false,\"eventProperty\":{\"trackableId\":\"01GDF2P4GS7EBZ8M2AWN707B\",\"interaction\":\"wwFVrK2vRE0lhQY0MREUzME5KNVY2VE1XNkJEMTUAAG3NDAwDE5BV1NSQwA=\"}}' href="https://ebay.com/itm/123456?hash=item28caef0a3a:g:E3kAAOSw1GJiMikD&amdata=enc%3AAQAHAHAASJowXGf0hxNZspTmh8%2FTJCCurAWCHuXJ2Xi3S9cwXL6BX04zSEiVaDMCvsUbApftgXEAHGJU1ZGugZ0%2FnW1U7Gb6vgoL%2BmXlqCbLkwoZfF3AUAK8YvJ5B4%2BnhFA7ID4dpxYs4jjExEnN5SR2g1mQe7QtLkmGt%2FZ%2FbH2W62cXPuKbf550ExbnBP02QJyZTXyCuw5KVkMdFMDuoB4p3FwJKcSPzez5kyQyVjyiIq6PB2q%7Ctkp%3AB1BMULq7kqyXYA" tabindex="-1" target="_blank"><div class="s-item__title"><span aria-level="3" role="heading"><!--F#f_0-->Shop on eBay<!--F/--></span></div><span class="clipped">Opens in a new window or tab</span></a><div class="s-item__subtitle"><!--F#f_0--><span class="SECONDARY_INFO">Brand New</span><!--F/--></div><div class="s-item__details clearfix"><div class="s-item__detail s-item__detail--primary"><span class="s-item__price"><!--F#f_0--><!--F#f_0-->$20.00<!--F/--><!--F/--></span></div><div class="s-item__detail s-item__detail--primary"><span class="s-item__purchase-options s-item__purchaseOptions"><!--F#f_0-->or Best Offer<!--F/--></span></div><div class="s-item__detail s-item__detail--primary"><span><div aria-labelledby="s-mpcp475" class="s-mpcp475_s-gyel585" role="text"><span aria-hidden="true"><wbr/>Sponsored</span></div></span><span class="s-item__space_bar"></span></div></div></div><!--F/--></div></li>`



```
In [23]: # FindAll but get the Nth item from the Match
soup_list = soup.findAll("li", attrs={"class":"s-item s-item__pl-on-bottom"})[1]
soup_list
```

Out[23]:

```
<li class="s-item s-item__pl-on-bottom" data-view="mi:1686|iid:1" data-viewpo
rt='{{"trackableId":"01H4D5TSJBGNKDBZAH6E0PHSB5"}' id="item54d3c37da6"><div cl
ass="s-item__wrapper clearfix"><!--F#f_0--><div class="s-item__image-sectio
n"><div class="s-item__image"><a _sp="p2351460.m1686.17400" aria-hidden="tru
e" data-carousel-tabindex="-1" data-interactions='[{"actionKind":"NAVSRC", "in
teraction":"wwFVrK2vRE0lhQQ0MDFINEQ1VFNLVEHaQzE0WktQQ05LRFRCCTTMMDFINEQ1VFNKQ
kdOS0RCWkFINKUwUEhTQjUAAAg3NDawDE5BVlNSQwA="}]' data-s-mpcp475='{ "eventFamil
y":"LST", "eventAction":"ACTN", "actionKind":"NAVSRC", "actionKinds":["NAVSRC
C"], "operationId":"2351460", "flushImmediately":false, "eventProperty":{"$1":"1
521906865548232"}' href="https://www.ebay.com.my/itm/364330057126?hash=item5
4d3c37da6:g:XMkAAOSwGD5koEyF&amdata=enc%3AAQAIAAAA4NJj3lEbzzWmNbd%2BzBhM
vIqqwe3ehxTlTeUIDJ%2FvFYsB960MDliHFW%2BhtbbeNwNpWo5ksXvblEWmq4opNsGs5ZAfMmyb
loGpUXBkZJwGCy1v%2BRZvdLnrLUKMD6XbwFos67x6geTnf3knNOV7ygNKIMznMShJClyj20Haim
BVqaEBS4EM96k%2Bs1PocvWCmK3uGB704NCjKk46%2F1fGnKLNXHcELZw8RSTESkK2MwZSF0D63B
c%2BW9ucqokT%2BrEKDrpfJnmVrNXv3SFwafuo7EyokjJqR80mAN4AfgDp2si%2F%7Ctkp%3ABk9
SR6CZ66WjYg" tabindex="-1" target="_blank"><div class="s-item__image-wrapper
image-treatment"></div></div><!--M#
s0-53-16-6-3-3[0]-10-1-14--><span class="s-item__watchheart on-image s-item__
watchheart--watch"><a _sp="" aria-label="watch Proton Saga Mitsuboshi CPK865
Original Fan Belt Brand New" class="s-item__watchheart-click" data-s-mpcp475
='{ "eventFamily":"LST", "eventAction":"ACTN", "actionKind":"NAVSRC", "actionKind
s":["NAVSRC"], "operationId":"2351460", "flushImmediately":false, "eventPropert
y":{"trackableId":"01H4D5TSJBGNKDBZAH6E0PHSB5", "clickaction":"WATCH", "amdat
a":"amclksrc=A2W", "adctrl":"AD_CTRL_ATW_ADD", "enc":"AQAIAAAA4NJj3lEbzzWmNbd+
zBhMvIqqwe3ehxTlTeUIDJ/vFYsB960MDliHFW+htbbeNwNpWo5ksXvblEWmq4opNsGs5ZAfMmyb
loGpUXBkZJwGCy1v+RZvdLnrLUKMD6XbwFos67x6geTnf3knNOV7ygNKIMznMShJClyj20HaimBV
qaEBS4EM96k+s1PocvWCmK3uGB704NCjKk46/1fGnKLNXHcELZw8RSTESkK2MwZSF0D63Bc+W9ucq
okT+reKDrpfJnmVrNXv3SFwafuo7EyokjJqR80mAN4AfgDp2si/", "moduledtl":"p2351460.m
4114.18480", "sid":"p2351460.m4114.18480"}' href="https://www.ebay.com.my/my
b/WatchListAdd?item=364330057126&pt=null&srt=0100080000050b2db324c7f
3c48e2012ddb7fccd0f6037d7bd8b5f31fe8ecf815d5d5cf7ec6008e66802c060e83279aa302c
b992905804ad4c56e488e25839c3a7b8c8d8dcecf510f0471abdd6189f4b716b96337834e&
p;ru=https%3A%2F%2Fwww.ebay.com.my%2Fsch%2FCar-Truck-Parts%2F6030%2Fi.html%3F
_from%3DR40%26_nkw%3DProton%26rt%3Dnc%26_pppn%3Dr1%26_fsrp%3D1"><span class
="s-item__watchheart-icon"><!--M#s0-53-16-6-3-3[0]-10-1-14-8-1-10-1-0--><svg
aria-hidden="true" class="icon icon--save-24" focusable="false"><defs data-ma
rko-key="@defs s0-53-16-6-3-3[0]-10-1-14-8-1-10-1-0"><symbol id="icon-save-2
4" viewBox="0 0 24 24"><path clip-rule="evenodd" d="M12 4.467c-.76-.817-1.488
-1.395-2.213-1.785C8.798 2.15 7.877 2 7 2 3.153 2 1 5.079 1 8.21c0 2.193 1.26
2 3.873 2.27 4.948l8 8.526a.996.996 0 0 1 1.46 0l3.998-4.261v-.001l4.001-4.26
4C21.738 12.083 23 10.403 23 8.21 23 5.079 20.847 2 17 2c-.878 0-1.798.15-2.7
87.682-.725.39-1.452.968-2.213 1.785Zm-.792 2.144c-.943-1.177-1.716-1.816-2.3
7-2.168C8.202 4.1 7.622 4 7 4 4.484 4 3 5.942 3 8.21c0 1.408.816 2.606 1.73
3.58L12 19.538l7.27-7.75C20.184 10.815 21 9.617 21 8.21 21 5.942 19.516 4 17
4c-.622 0-1.201.1-1.838.443-.654.352-1.427.991-2.37 2.168a1.015 1.015 0 0 1-.
381.301 1.002 1.002 0 0 1-1.203-.301Z" fill-rule="evenodd"></path></symbol></
defs><use xlink:href="#icon-save-24"></use></svg><!--M/s0-53-16-6-3-
3[0]-10-1-14-8-1-10-2-0--><svg aria-hidden="true" class="icon icon--save-fill
ed-24" focusable="false"><defs data-marko-key="@defs s0-53-16-6-3-3[0]-10-1-1
4-8-1-10-2-0"><symbol id="icon-save-filled-24" viewBox="0 0 24 24"><path d="M
7 2C3.153 2 1 5.079 1 8.21c0 2.193 1.262 3.873 2.27 4.948l8 8.526a1 1 0 0 0
```

```

1.46 018-8.526C21.737 12.083 23 10.403 23 8.21 23 5.079 20.847 2 17 2c-.878 0
-1.798.15-2.787.682-.725.39-1.452.968-2.213 1.785-.76-.817-1.488-1.395-2.213-
1.785C8.798 2.15 7.877 2 7 2Z"></path></symbol></defs><use xlink:href="#icon-
save-filled-24"></use></svg><!--M/--><!--M/--></div><div cl
ass="s-item__info clearfix"><a _sp="p2351460.m1686.17400" class="s-item__lin
k" data-interactions='[{"actionKind":"NAVSRC","interaction":"wwFvRK2vRE0lhQQ0
MDFINEQ1VFNLVEhaQzE0WktQQ05LRFRCTTM0MDFINEQ1VFNKQkdOS0RCWkFINKUwUEhTQjUAAAg3N
DAwDE5BVLNSQwA="}]' data-s-mpcp475='{ "eventFamily":"LST","eventAction":"ACT
N","actionKind":"NAVSRC","actionKinds":["NAVSRC"],"operationId":"2351460","fl
ushImmediately":false,"eventProperty":{"$1":"1521906865548232"}}' href="http
s://www.ebay.com.my/itm/364330057126?hash=item54d3c37da6:g:XMkAAOSwGD5koEyF&a
mp;amdata=enc%3AAQAIAAAA4NJJj3lEbzzWmNbd%2BzBhMvIqqwe3ehxTlTeUIDJ%2FvFYsB960M
DliHFW%2BhtbbeNwNpWo5ksXvblEwmqa4opNsGs5ZAfMmybloGpUXBkZJwGCy1v%2BRZvdLNr1UKm
MD6XbWFos67x6geTnf3knNOV7ygNKIMznMShJCljy20HaimBVqaEBS4EM96k%2BslPocvWCmK3uGB
704NCjKk46%2F1fGnKLNxHcELZw8RSTESkK2MwZSF0D63Bc%2BW9ucqokT%2BreKDrpfJnmVrNXv3
SFWafuo7EyokjJqR80mAN4AfgDp2si%2F%7Ctkp%3ABk9SR6CZ66WjYg" target="_blank"><d
iv class="s-item__title"><!--F#f_0-->Prot
on Saga Mitsuboshi CPK865 Original Fan Belt Brand New<!--F/--></div><s
pan class="clipped">Opens in a new window or tab<div class="s-item
__subtitle"><!--F#f_0-->Brand New<!--F/--
></div><div class="s-item__details clearfix"><div class="s-item__detail s-ite
m__detail--primary"><!--F#f_0--><!--F#f_0-->RM 1
8.00<!--F/--><!--F/--></div><span class="s-item__detail s-item__detail
--secondary"><span class="s-item__seller-in
fo-text">wln2126 (221) 100%<div class="s-item__detail s-
item__detail--primary"><!--F#f_0-
->0 bids<!--F/--> . </
span><!--M#s0-53-16-6-3-3[0]-10-1-33[1[2[0]]]-1--><span class="s-item
__time">Time left
5d 9h left (Sat, 08:59 AM)<!--M/--></div><div class="s-item__detail s-item__detail--primary"><span cla
ss="s-item__shipping s-item__logisticsCost"><!--F#f_0-->+RM 5.00 postage<!--
F/--></div><div class="s-item__detail s-item__detail--primary"><span c
lass="s-item__location s-item__itemLocation"><!--F#f_0-->from Malaysia<!--F/-
-></div><div class="s-item__detail s-item__detail--primary"> <di
v aria-labelledby="s-gyel585" class="s-gyel585_s-mpcp475" role="text"><span a
ria-hidden="true"><wbr/>Sponsored</div><span class="s-item__spa
ce_bar"></div></div></div><!--F/--></div>

```

```
In [28]: soup_list = soup.findAll("li", attrs={"class":"s-item s-item__pl-on-bottom"})
 for items in range(len(soup_list)):
 print(soup_list[items].find("span", attrs={"role":"heading"}).text)
```

Shop on eBay

Proton Saga Mitsuboshi CPK865 Original Fan Belt Brand New

4D68 For MITSUBISHI GALANT OR PROTON PERSONA 400 Engine Rebuild Kits Auto Engine

Tail Lamp Proton Perdana V6 RH

New ListingProton Satria Phase 1 94-05 Drivers Manual Door Mirror

New ListingProton Satria 94-05 Passenger Electric Window Regulator

5PK865 GATES V-Ribbed Belt for BMW,BYD,FERRARI,MITSUBISHI,PROTON,TOYOTA,ZHONG HUA

New Listing1 987 949 536 ENGINE TIMING BELT CAM BELT BOSCH NEW OE REPLACEMENT CT841 CONTITECH TIMING BELT (Mitsubishi, Proton 1.6 92-) NEW O.E SPEC!

New ListingENGINE TIMING BELT CAM BELT CONTITECH CT738 A FOR PROTON PERSONA 400,WIRA

New ListingENGINE TIMING BELT CAM BELT CONTITECH CT821 P FOR PROTON PERSONA 400 1.8L 85KW

Keilrippenriemen MAPCO 261675 für AUDI CITROËN FIAT FORD PEUGEOT PROTON RENAULT

Timing Belt fits PROTON SATRIA 1.6 96 to 00 4G92 Contitech MD176386 Quality New

New Genuine DAYCO Timing Belt Camshaft For Proton Persona Satria Wira #94510 DAYCO TIMING BELT KIT for PROTON SUPRIMA 01/2014-on 1.6 4cyl TMPFI TURBO CR I AFM

BOSCH ZAHNRIEMEN STEUERRIEMEN 1 987 949 518 P FÜR PROTON SAVVY 1.2 1.2L 55KW

GATES Timing Belt/Water Pump Kit for Proton Savvy 1.2 Oct 2005 to Oct 2012

New DAYCO Timing Belt Kit For Proton M21 KTBA120

GATES K014PK928 V-Ribbed Belt Set for DACIA,NISSAN,PROTON,RENAULT

Courroie Dentée AE TB380 Compatible Avec Dayco KTB380 - Mitsubishi/Proton

New ListingBOSCH ZAHNRIEMEN STEUERRIEMEN 1 987 948 832 P FÜR PROTON SATRIA,PERSONA 400

Timing Belt fits PROTON 1.5 1.5 88 to 91 QH MD113564 Genuine Quality Guaranteed

GATES Timing Belt Kit To Suit Proton Persona 316 GLXi Petrol

Dayco Timing Belt T1353 fits MITSUBISHI/ PROTON 94904

ZAHNRIEMEN STEUERRIEMEN BOSCH 1 987 949 064 P NEU OE QUALITÄT

New V-Ribbed Belt for ROVER PROTON MG LAND ROVER:200 Coupe,400 Tourer, CDU2160

Brand New DAYCO Timing Belt to fit Proton Wira 2005-2009

Brand New DAYCO Timing Belt to fit Proton Wira 1996-2000

Timing Belt fits PROTON COMPACT C9 1.6 97 to 00 4G92 QH MD176386 Quality New

HI-FLOW THERMOSTAT TT281-180 SUIT LEXUS MITSUBISHI NISSAN PROTON TOYOTA

New ListingENGINE TIMING BELT CAM BELT BOSCH 1 987 948 825 P FOR MITSUBISHI GALANT V,L 400

New ListingProton Satria Phase 1 94-05 Digital Display Clock

Correa Dentada AE TB379 Compatible Con Dayco KTB379 - Mitsubishi/Proton

New DAYCO Timing Belt For Proton Satria 94494

1x Meyle 0500040763 Keilrippenriemen für MITSUBISHI NISSAN ROVER SUZUKI PROTON

NEW V RIBBED BELT SET FOR RENAULT DACIA NISSAN PROTON KANGOO RAPID FC0 1 GATES

Genuine GATES Drive Belt for Mitsubishi Galant 4G37 1.8 Litre (11/1988-10/1992)

V-RIBBED FAN BELT FOR PROTON SATRIA 5PK1113 OEM QUALITY

BOSCH ZAHNRIEMEN STEUERRIEMEN 1 987 949 064 P FÜR HYUNDAI PONY EXCEL,PONY

ZAHNRIEMEN STEUERRIEMEN DAYCO 94195 I FÜR KIA JOICE 2.0 2L 102KW,88KW

ZAHNRIEMEN STEUERRIEMEN CONTITECH CT738 P FÜR PROTON PERSONA 400,WIRA 1.3L,1.5L

Balance Shaft Belt fits MITSUBISHI LANCER 1.8 2.0 2.0D 89 to 08 QH MD192295 N

ew

1x Meyle 0500040763 V-Ribbed for Mitsubishi Nissan Rover Suzuki Proton  
ZAHNRIEMEN STEUERRIEMEN GATES 5550XS P FÜR PROTON IMPIAN 1.8 1.8L 93KW  
GATES Drive Belt Kit for Proton Savvy 1149cc 1.2 October 2005 to October 2012  
New ListingProton Satria 94-05 Drivers Electric Window Regulator  
TIMING BELT FOR PROTON SATRIA 50092 PREMIUM QUALITY  
Timing Belt fits MITSUBISHI GALANT Mk5 1.8 92 to 96 QH MD176387 MD186376 Qual  
ity  
VRIBBED BELT FOR PROTON PERSONA/400/Hatchback/300 WIRA/Sedan/Aeroback SATRIA  
New ListingExhaust Front / Down Pipe + Fitting Kit fits PROTON WIRA 1.5 Front  
94 to 97 4G15  
ENGINE TIMING BELT CAM BELT CONTITECH CT1008 A FOR PROTON IMPIAN 1.6 1.6L 76K  
W  
New ListingPROTON GEN-2 MK1 2004-2014 STEERING PUMP 1.6 PETROL  
Proton Jumbuck Persona Gti Satria Engine Mount Slotted Insert Set Upgrade 4G9  
3  
New ListingPROTON GEN-2 MK1 2004-2014 WIPER LINKAGE PW 851713  
Timing Belt fits CHEVROLET MATIZ M2 1.0 2005 on QH D96610029 96610029 Quality  
ZAHNRIEMEN STEUERRIEMEN DAYCO 94216 I NEU OE QUALITÄT  
GOODYEA TIMING BELT FOR HYUNDAI MITSUBISHI PROTON F1038H 94216 CT738  
KEILRIIPPENRIEMEN FÜR FIAT MITSUBISHI PROTON GATES 5PK1083  
TIMING BELT FOR PROTON WIRA 50117 PREMIUM QUALITY  
Distributor New Proton Persona Wira T2T58272 MD328420  
Brand New DAYCO Timing Belt to fit Proton S16 2009-2022  
ENGINE TIMING BELT CAM BELT GATES 5283XS P NEW OE REPLACEMENT  
DAYCO Timing Belt Kit FOR Proton M21 Oct 1997-Nov 2000 1.8L 16V MPFI 4G93  
5 SPARCO - RACING SPORT MUDFLAPS  
1000B334 FULL GASKET KIT MITSUBISHI 4B11/12 FOR LANCER OUTLANDER 2.0 LTR

```
In [29]: soup_list = soup.findAll("li", attrs={"class":"s-item s-item__pl-on-bottom"})
 for items in range(len(soup_list)):
 print(soup_list[items].find("span", attrs={"role":"heading"}).text)
```

Shop on eBay

Proton Saga Mitsuboshi CPK865 Original Fan Belt Brand New

4D68 For MITSUBISHI GALANT OR PROTON PERSONA 400 Engine Rebuild Kits Auto Engine

Tail Lamp Proton Perdana V6 RH

New ListingProton Satria Phase 1 94-05 Drivers Manual Door Mirror

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Balance Shaft Belt fits MITSUBISHI LANCER 1.8 2.0 2.0D 89 to 08 QH MD192295 N



ew

1x Meyle 0500040763 V-Ribbed for Mitsubishi Nissan Rover Suzuki Proton  
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New ListingProton Satria 94-05 Drivers Electric Window Regulator  
TIMING BELT FOR PROTON SATRIA 50092 PREMIUM QUALITY  
Timing Belt fits MITSUBISHI GALANT Mk5 1.8 92 to 96 QH MD176387 MD186376 Qual  
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Proton Jumbuck Persona Gti Satria Engine Mount Slotted Insert Set Upgrade 4G9  
3  
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5 SPARCO - RACING SPORT MUDFLAPS  
1000B334 FULL GASKET KIT MITSUBISHI 4B11/12 FOR LANCER OUTLANDER 2.0 LTR

```
In [31]: soup_list = soup.findAll("li", attrs={"class":"s-item s-item__pl-on-bottom"})
 for items in range(len(soup_list)):
 print(soup_list[items].find("span", attrs={"class":"s-item__price"}).text)
```

\$20.00  
RM 18.00  
RM 410.74  
RM 250.00  
RM 177.72  
RM 201.76  
RM 203.89  
RM 189.83  
RM 191.25  
RM 189.00  
RM 283.94  
RM 105.21  
RM 170.84  
RM 662.80  
RM 372.80  
RM 167.48  
RM 732.44  
RM 645.71  
RM 287.61  
RM 68.13  
RM 182.76  
RM 107.64  
RM 500.22  
RM 195.71  
RM 116.87  
RM 87.76  
RM 211.27  
RM 528.18  
RM 182.71  
RM 117.91  
RM 218.67  
RM 177.72  
RM 68.69  
RM 308.11  
RM 48.48  
RM 415.38  
RM 135.41  
RM 103.67  
RM 121.65  
RM 141.82  
RM 162.19  
RM 94.23  
RM 200.93  
RM 269.13  
RM 497.15  
RM 201.76  
RM 121.11  
RM 165.03  
RM 118.15  
RM 292.19  
RM 242.41  
RM 237.30  
RM 683.52  
RM 237.30  
RM 196.59  
RM 137.24  
RM 106.75

RM 116.61  
 RM 159.92  
 RM 593.11  
 RM 329.33  
 RM 153.99  
 RM 557.35  
 RM 155.00  
 RM 228.71

```
In [43]: # Exercise
Find the Cheapest Item
import re

soup_list = soup.findAll("li", attrs={"class": "s-item s-item__pl-on-bottom"})

cheapest = []

for items in range(len(soup_list)):
 cheapest.append(float(re.sub(r'^\d.', '', soup_list[items].find("span", a

x = soup_list[items].find("span", attrs={"class": "bold"}).text
cheapest.append(re.sub(r'^\d-9.', '', x))

print("Cheapest Item is: RM", min(cheapest))

Should not work, why?

Cheapest Item is: RM 18.0
```

```
In [53]: import re

input_value="RM 1,000.00"

result = re.sub(r"RM ", "", input_value)

print(result)

1,000.00
```

```
In [52]: import re

input_value="RM 1,000.00"

result = re.sub(r'^\d-9.', '', input_value)

print(result)

100000
```

```
In [51]: import re

input_value="RM 1,000.00"

result = re.sub(r'^\d-9.', '', input_value)

print(result)
```

1000.00

```
In [54]: # Exercise
Find the Cheapest Item
Use regex to remove the RM Suffix
import re

soup_list = soup.findAll("li", attrs={"class":"s-item s-item__pl-on-bottom"})

cheapest = []

for items in range(len(soup_list)):
 cheapest.append(float(re.sub(r'^\d.', '', soup_list[items].find("span", a

x = soup_list[items].find("span", attrs={"class":"bold"}).text
cheapest.append(re.sub(r'^\d-9.', '', x))

print("Cheapest Item is: RM", min(cheapest))
```

Cheapest Item is: RM 18.0

```
In [55]: cheapest = [1,2,3,4,5]
min(cheapest)
```

Out[55]: 1

```
In [58]: soup_list = soup.findAll("li", attrs={"class":"s-item s-item__pl-on-bottom"})
 for items in range(len(soup_list)):
 print(soup_list[items].find("span", attrs={"class":"s-item__price"}).text)
```

\$20.00  
RM 18.00  
RM 410.74  
RM 250.00  
RM 177.72  
RM 201.76  
RM 203.89  
RM 189.83  
RM 191.25  
RM 189.00  
RM 283.94  
RM 105.21  
RM 170.84  
RM 662.80  
RM 372.80  
RM 167.48  
RM 732.44  
RM 645.71  
RM 287.61  
RM 68.13  
RM 182.76  
RM 107.64  
RM 500.22  
RM 195.71  
RM 116.87  
RM 87.76  
RM 211.27  
RM 528.18  
RM 182.71  
RM 117.91  
RM 218.67  
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RM 683.52  
RM 237.30  
RM 196.59  
RM 137.24  
RM 106.75

RM 116.61  
RM 159.92  
RM 593.11  
RM 329.33  
RM 153.99  
RM 557.35  
RM 155.00  
RM 228.71

```
In [60]: soup_list = soup.findAll("li", attrs={"class":"s-item s-item__pl-on-bottom"})

for items in range(1,len(soup_list)):
 print(soup_list[items].find("span", attrs={"role":"heading"}).text)
 print(soup_list[items].find("span", attrs={"class":"s-item__price"}).text)
 print()
```

Proton Saga Mitsuboshi CPK865 Original Fan Belt Brand New  
RM 18.00

4D68 For MITSUBISHI GALANT OR PROTON PERSONA 400 Engine Rebuild Kits Auto Engine  
RM 410.74

Tail Lamp Proton Perdana V6 RH  
RM 250.00

New ListingProton Satria Phase 1 94-05 Drivers Manual Door Mirror  
RM 177.72

New ListingProton Satria 94-05 Passenger Electric Window Regulator  
RM 201.76

5PK865 GATES V-Ribbed Belt for BMW,BYD,FERRARI,MITSUBISHI,PROTON,TOYOTA,ZHONGHUA  
RM 203.89

## Exercise

Store the results obtained into a Dataframe and save it as CSV file

1. Column 1 is "Product Name"
2. Column 2 is "Product Price"



```
In [63]: import pandas as pd
soup_list = soup.findAll("li", attrs={"class": "s-item s-item__pl-on-bottom"})
productName=[]
productPrice=[]
for items in range(1,len(soup_list)):
 productName.append(soup_list[items].find("span", attrs={"role": "heading"}).text)
 productPrice.append(soup_list[items].find("span", attrs={"class": "s-item__price"}).text)
 print()
data = {"Product Name": productName, "Product Price": productPrice}
df = pd.DataFrame(data)

df.to_csv("products.csv", index=False)
```



