from bs4 import BeautifulSoup as soup

import requests

import pandas as pd

from urllib.request import urlopen

kbb\_url = "http://www.kbb.com/car-values"

r = requests.get(kbb\_url)

# create soup1 object for the top level HTML page (to search recursively for makers, models and Links)

soup1 = soup( r.content, 'html.parser')

#print(soup1.prettify())

i = 0

j = 0

k = 0

maker\_dct = {}

#search recursively for all TAG ‘a’ with certain class attributes

for m1 in soup1.find\_all(‘div’, class\_=”css-k9vu0d-SelectWrapper-body-VehiclePickerInput e1019m8z0”) :  
 print(m1.text)

i = i + 1

for m2 in m1.find\_all(‘select’, class\_=”css-1qn61q8-StyledHiddenSelect e1euwze60”) :

print(m2.text)

j = j + 1

# List of Makers

for m3 in m2.find\_all(‘option’, attrs={‘value’ : True}) :

k = k + 1

if m3 = NULL

continue

print(i, j, k)

maker = m3.get(‘value’) # is a Maker key to the maker\_dct{}

# create the Maker URL

maker.lower().strip()

maker.replace( ‘ ‘, ‘-‘) # replace ‘ ‘ with ‘-‘  
maker\_url = [https://www.kbb,com/](about:blank) + maker

# get the soup object (soup2) for the above maker name

r = requests.get(maker\_url) # maker URL

soup2 = soup(r.content, 'html.parser')

# get model names and one link per model

for model in soup2.find\_all('a', class\_="js-ymm-link result-ymm-title js-sponsored-url" ) :

m\_name = model.find('h3', class\_="title-three")

if m\_name in model\_name :

continue

model\_name.append(m\_name)

# get the link / URL for the above model name

m\_link = model.find('a')['href']

if m\_link in model\_url :

continue

# create an entry in the dictionary

maker\_dct[maker] = maker\_dct.get(maker, []) + [model\_name, model\_url]

#print(maker, model\_name, model\_url)

df = pd.DataFrame(maker\_dct)

print (df)