| **Method name** | **WebElement object/list returned** |
| --- | --- |
| browser.find\_element\_by\_class\_name(*name*)  browser.find\_elements\_by\_class\_name(*name*) | Elements that use the CSS class *name* |
| browser.find\_element\_by\_css\_selector(*selector*)  browser.find\_elements\_by\_css\_selector(*selector*) | Elements that match the CSS *selector* |
| browser.find\_element\_by\_id(*id*)  browser.find\_elements\_by\_id(*id*) | Elements with a matching *id* attribute value |
| browser.find\_element\_by\_link\_text(*text*)  browser.find\_elements\_by\_link\_text(*text*) | <a> elements that completely match the *text* provided |
| browser.find\_element\_by\_partial\_link\_text(*text*)  browser.find\_elements\_by\_partial\_link\_text(*text*) | <a> elements that contain the *text* provided |
| browser.find\_element\_by\_name(*name*)  browser.find\_elements\_by\_name(*name*) | Elements with a matching *name* attribute value |
| browser.find\_element\_by\_tag\_name(*name*)  browser.find\_elements\_by\_tag\_name(*name*) | Elements with a matching tag *name* (case insensitive; an <a> element is matched by 'a' and 'A') |

Since so much work on a computer involves going on the Internet, it’d be great if your programs could get online. *Web scraping* is the term for using a program to download and process content from the Web. For example, Google runs many web scraping programs to index web pages for its search engine. In this chapter, you will learn about several modules that make it easy to scrape web pages in Python.

* **webbrowser**. Comes with Python and opens a browser to a specific page.
* **Requests**. Downloads files and web pages from the Internet.
* **Beautiful Soup**. Parses HTML, the format that web pages are written in.
* **Selenium**. Launches and controls a web browser. Selenium is able to fill in forms and simulate mouse clicks in this browser.

**Finding Elements on the Page**

WebDriver objects have quite a few methods for finding elements on a page. They are divided into the find\_element\_\* and find\_elements\_\* methods. The find\_element\_\* methods return a single WebElement object, representing the first element on the page that matches your query. The find\_elements\_\* methods return a list of WebElement\_\* objects for*every*matching element on the page.

[Table 11-3](https://automatetheboringstuff.com/chapter11/#calibre_link-11)shows several examples of find\_element\_\* and find\_elements\_\* methods being called on a WebDriver object that’s stored in the variable browser.

Table 11-3. Selenium’s WebDriver Methods for Finding Elements