

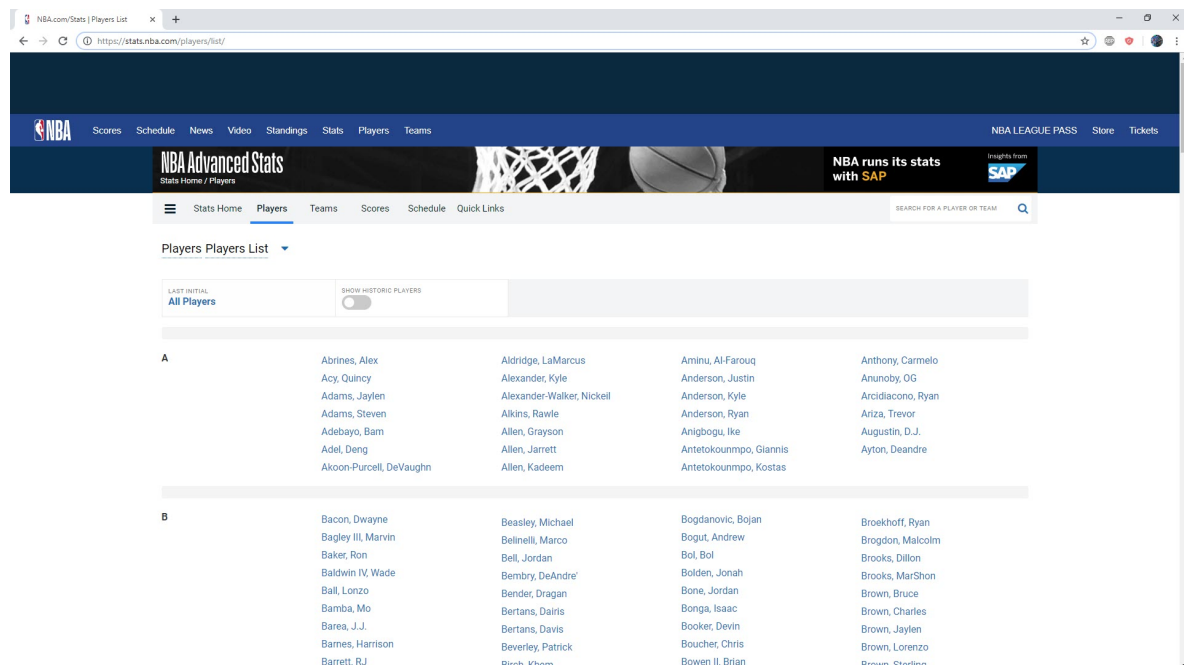
## NBA projects introduction

[NBA](#) is popular site when you want to find information about men's professional basketball league in North America. In this chapter we will do 4 different missions to scraping data on this site.

- scrape name of all players
- scrape name and detail link of all players
- scrape detail information of all players
- scrape image of all players

### Mission 1 : scrape name of all active player

Let access url <https://stats.nba.com/players/list/> , you will see full list of player order in alphabet list.



Right click and select 'Inspect' you will open chrome developer tool panel

The screenshot shows the NBA.com/Stats Players List page. The browser developer tools are open, displaying the DOM tree. The selected element is a link for Alex Abrines, with the following structure:

```

<div>
  <div class="stats-filters-advanced ng-hide" ng-show="showSplits" aria-hidden="true"></div>
  <div stats-loader="isLoading"></div>
  <section class="row collapse players-list_section" ng-repeat="letter in playersByLastName" data-last-initial="letter.items.length0 && isLoading" aria-hidden="false">
    <div class="spacer small-12"></div>
    <div class="small-12 large-2 columns players-list_header"></div>
    <div class="large-10 columns">
      <ul class="players-list_names">
        <li ng-repeat="player in letter.items" class="players-list_name">
          <a href="/player/283518/">Abrines, Alex</a>
        </li>
        <li ng-repeat="player in letter.items" class="players-list_name"></li>
        <li ng-repeat="player in letter.items" class="players-list_name"></li>
        <li ng-repeat="player in letter.items" class="players-list_name"></li>
        <li ng-repeat="player in letter.items" class="players-list_name"></li>
        <li ng-repeat="player in letter.items" class="players-list_name"></li>
      </ul>
    </div>
  </section>
</div>

```

Now move the mouse around and find the tag which contain all names inside it. You will find out that is `div` tag with `class` name is `stats-player-list`

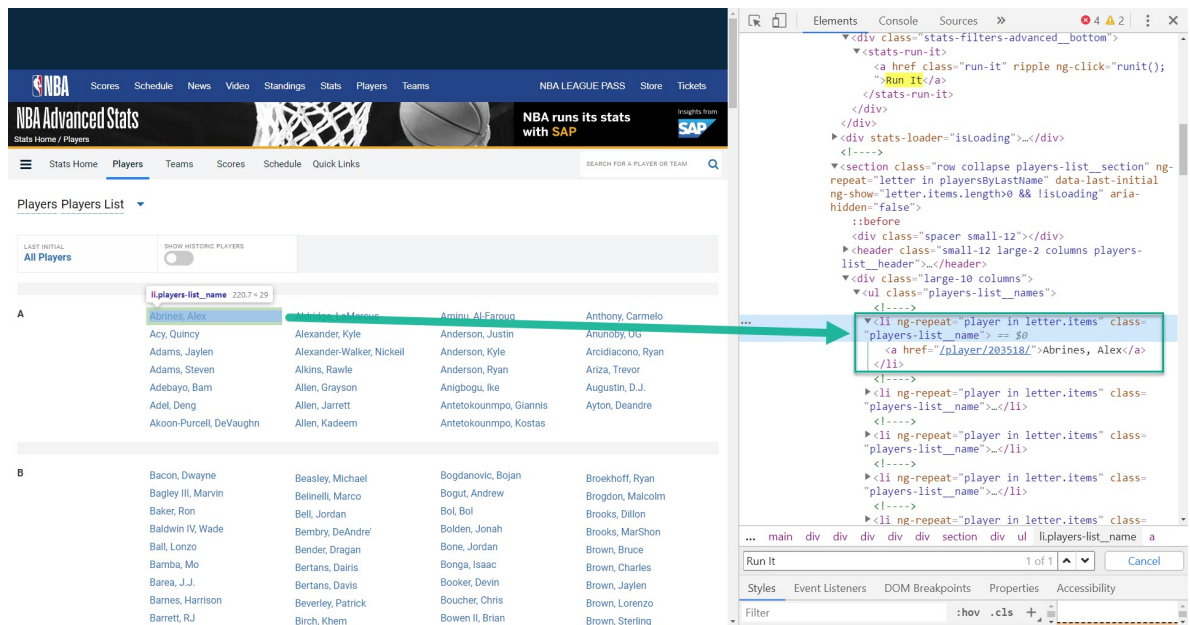
The screenshot shows the NBA.com/Stats Players List page. The browser developer tools are open, displaying the DOM tree. The selected element is a `div` tag with the class `stats-player-list`, which contains all the player names. The structure is as follows:

```

<div class="nav-container" ng-controller="StatsHeaderController" set-class-scroll-top data-element-class="nav-container-fixed" data-body-class="nav-fixed"></div>
<div class="stats-container_inner">
  <div class="stats-players-page" data-nav-section="players">
    <div class="breadcrumbs">
      <ol class="breadcrumbs_list" itemscope itemtype="http://schema.org/BreadcrumbList"></ol>
    </div>
    <div class="row">
      <div class="columns / small-12 / section-view-overlay">
        <div class="nav-dropdown data-alpha="players" data-beta="players-list" data-gamma="Innav-dropdown">
          <div ng-controller="PlayersListController" class="stats-player-list players-list">
            <div class="row rows collapse stats-filters-top"></div>
            <div class="stats-filters-advanced ng-hide" ng-show="showSplits" aria-hidden="true"></div>
            <div stats-loader="isLoading"></div>
            <section class="row collapse players-list_section" ng-repeat="letter in playersByLastName" data-last-initial="letter.items.length0 && isLoading" aria-hidden="false"></section>
            <section class="row collapse players-list_section" ng-repeat="letter in playersByLastName" data-last-initial="letter.items.length0 && isLoading" aria-hidden="false"></section>
            <section class="row collapse players-list_section" ng-repeat="letter in playersByLastName" data-last-initial="letter.items.length0 && isLoading" aria-hidden="false"></section>
          </div>
        </div>
      </div>
    </div>
  </div>
</div>

```

Now mouse over one name and inspect, you will see that it inside `li` tag with class `players-list_name`



So after inspection we have following strategy to scrape all name.

- search for `div` tag with `class` is `stats-player-list`
- search all `li` tags with class `players-list_name` inside above `div` tag
- scrape text inside each `li` tag above

Now let really do it

```
from selenium import webdriver
from bs4 import BeautifulSoup

driver =
webdriver.Chrome(executable_path=r'C:\chromedriver_win32\chromedriver.exe')

url = 'https://stats.nba.com/players/list/'
driver.get(url)

soup = BeautifulSoup(driver.page_source, 'lxml')
div = soup.find('div', class_='stats-player-list')

for a in div.find_all('a'):
    print(a.text)

driver.quit()
```

And at out put you will have 638 players

```
Abrines, Alex
Acy, Quincy
Adams, Jaylen
Adams, Steven
Adebayo, Bam
Adel, Deng
Akoon-Purcell, DeV Vaughn
Aldridge, LaMarcus
Alexander, Kyle
...
```

## Mission 2 : scrape name and detail link of all active player (try it your self)

In this mission we scrape name and correspond link to detail information of that player.

Final result should look like

```
Abrines, Alex
/player/203518/

Acy, Quincy
/player/203112/

Adams, Jaylen
/player/1629121/
```

## Mission 3 : scrape detail information for each player (try it your self)

When click to detail link, you will know player detail information

NBA.com/Stats | Players List

NBA.com/Stats | Alex Abrines

NBA.com/Stats | Rawle Alkins

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https://stats.nba.com/player/1628959/

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SEARCH FOR

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In this mission, we will need to scrape detail data for each player like : name, PTS, REB, AST, PIE

The result should be

```
name : Abrines, Alex
link : https://stats.gleague.nba.com/player/203518/
pts : 0.0
reb : 0.0
ast : 0.0
pie : 0.0

name : Acy, Quincy
link : https://stats.gleague.nba.com/player/203112/
pts : 21.7
reb : 8.0
ast : 1.3
pie : 12.0

...
```

## Mission 4 : scrape image for all players (try it your self)

Now we want to get image for each player



#20

Rawle Alkins

 G | CHICAGO BULLS

NBA G League Stats

Compare Player

|     |         |      |            |       |                           |     |       |     |     |     |     |     |     |
|-----|---------|------|------------|-------|---------------------------|-----|-------|-----|-----|-----|-----|-----|-----|
| HT  | 6-5     | WT   | 225 lbs    | PRIOR | University of Arizona/USA | PTS | 3.7   | REB | 2.6 | AST | 1.3 | PIE | 5.1 |
| AGE | 21 27Ad | BORN | 10/29/1997 | DRAFT | Undrafted                 | EXP | 1 yrs |     |     |     |     |     |     |

Result should as following video