

24.11. Searching for Media on iTunes

You've already seen an example using the iTunes API in Generating Request URLs. (RESTintro.html#generating-request-urls) The iTunes API allows users to search for movies, podcasts, music, music videos, tv shows, and books that are hosted on the iTunes site. You can explore the official iTunes API documentation (<https://affiliate.itunes.apple.com/resources/documentation/itunes-store-web-service-search-api/>).

Earlier we showed a possible query for podcasts about Ann Arbor. Now, we'll show you how to construct it yourself!

We will first need to write our import statements, so that we have access to the requests module and json module.

```
import requests
import json
```

At this point, we look to our documentation to find out what the base of the url will be as well as what parameters are needed to construct the request. In the Searching (<https://affiliate.itunes.apple.com/resources/documentation/itunes-store-web-service-search-api/#searching>) section of the documentation, we can see that the url should be in the form of <https://itunes.apple.com/search?parameterkeyvalue> so we know the base url should be <https://itunes.apple.com/search>. To determine what parameters are necessary, we can look at the table in the documentation to learn what parameter keys and values will be understood by the iTunes API server.

term is a required parameter with no default value, so we'll have to provide that.

Look at the iTunes API documentation. If we're looking for podcasts originating in Ann Arbor, what value should be associated with the key "term"?

```
import requests
import json

params = {"term": }
```


Yes! We want to search for Ann Arbor, so that should be the value associated with "term".

Activity: 24.11.1 Fill in the Blank (question27_9_1)

We also want to make sure that we're searching for podcasts.

Look at the iTunes API documentation. What is the key we need to use to only search for podcasts?

```
import requests
import json

params = { : "podcast"}
```



(requestsCookbook.html)

(flickr.html)

Yes, you can use this parameter for this task!

Activity: 24.11.2 Fill in the Blank (question27_9_2)

Note that both *entity* *and* *media* are parameters we can use for this task. Entity can be more specific though, so you may need to use that in rather than media!

Now, our code can now make a request to the iTunes API. We're using the `request_with_caching` module and providing a cached response to the query in the activecodes. You can try running different queries, but if the itunes webserver is inaccessible to you for one reason or another, it may not work.

Original - 1 of 1

```

1
2
3
4
5 .apple.com/search", params = parameters,permanent_cache_file="itunes_cache.txt")
6
7
8

```

found in permanent_cache

Activity: 24.11.3 ActiveCode (ac27_9_1)

With that result in hand, you will have to go through the process previously described as Understand. Extract. Repeat. (`../NestedData/WPExtractFromNestedData.html#debug-nested-chap`) . For example, to print out the names of all the podcasts returned, one could run the following code.



(requestsCookbook.html)

Original - 1 of 1



(flickr.html)

```

1 import requests_with_caching
2 import json
3

```

```
4 parameters = {"term": "Ann Arbor", "entity": "podcast"}
5 iTunes_response = requests_with_caching.get("https://itunes.apple.com/search")
6
7 py_data = json.loads(iTunes_response.text)
8 for r in py_data['results']:
9     print(r['trackName'])
10
```

```
found in permanent_cache
Ann Arbor Stories | Ann Arbor District Library
Vineyard Church of Ann Arbor Sermon Podcast
Harvest Mission Community Church (Ann Arbor) Sermons
Grace Bible Church Ann Arbor
Grace Ann Arbor Church
Sermons from First Pres
Antioch Ann Arbor
Blue Ocean Faith Ann Arbor Sunday Sermons
It's Hot In Here
Radiant Church - Ann Arbor: Sermons
Calvary Sunday Messages
Fellow Youths | Ann Arbor District Library
Behind The Marquee | Ann Arbor District Library
Ann Arbor SPARK CEO Podcast
Bethel AME - Ann Arbor
Sermons - NewLifeA2.org
Ann Arbor West Side UMC Sermons
Martin Bandyke Under Covers | Ann Arbor District Library
Grace Ann Arbor Podcast
Mosaic Church of Ann Arbor
A2 City News
Presenting Alfred Hitchcock Presents | Ann Arbor District Library
Redeemer Ann Arbor
Zion Lutheran Ann Arbor
Living Writers
2|42 Community Church - Ann Arbor
```

Activity: 24.11.4 ActiveCode (ac27_9_2)

Data file: itunes_cache.txt



(requestsCookbook.html)



(flickr.html)

```
{  
  "https://itunes.apple.com/searchentity-podcast_term-Ann Arbor": "{\n  \"resultCount\":26,\n}
```

You have attempted 5 of 5 activities on this page

✓ **Completed. Well Done!**



(requestsCookbook.html)



(flickr.html)