

Programming assignment / Playlist messages

The task is to write a program that builds a playlist of Spotify tracks such that it looks like a message, inspired by various people on the internet doing this thing, for instance

<http://spotifypoetry.tumblr.com/>

We discussed this a bit and realized this can be done automatically using our metadata API which is accessible at <http://developer.spotify.com/en/metadata-api/overview/>

So, your task will be to implement a Python application doing this. You can read the input in any way you want (command line arguments, run it as a web server and take a query string, etc). Feel free to use any Python modules or frameworks that are reasonably standard.

The input to the application will be the message, and its output will be a list of Spotify tracks, i.e. if the input is "if i can't let it go out of my mind", one valid output would be:

- <http://open.spotify.com/track/6mcu7D7QuABVwUGDwovOEh>
- <http://open.spotify.com/track/5ZRxxnab9kLUqZPzoelgGP>
- <http://open.spotify.com/track/3L0bYyI0FHRIID1xZfbZedz>

(this is the beginning of one of the poems on the blog).

To be clear the output should be a playlist that reads out the original text. For instance:

	Track	Buy	Artist	Time	Album
☆	If I Can't	👉	50 Cent	3:17	Get Rich Or Die Tryin
☆	Let It Go		Zac Brown Band	4:37	You Get What You Give
☆	Out Of My Mind	👉	James Blunt	3:33	Back To Bedlam
☆	I'm Scared	👉	Duffy	3:09	Rockferry
☆	My Stupid Heart	👉	Turbo Fruits	3:56	Echo Kid
☆	My Stupid Mouth	👉	John Mayer	3:44	No Such Thing
☆	Will Try	👉	Mathieu Leguern	3:18	Music 2 Eat
☆	Finding a Way Home		Seneca Hawk	3:15	Sun Year Long
☆	Home To You	👉	Michael Learns To Rock, ...	3:38	Michael Learns To Rock
☆	Letting You Know	👉	Breather	3:51	One In A Million
☆	All The Ways		Yourself And The Air	4:03	Friend Of All Breeds
☆	I Want The World To Stop		Belle & Sebastian	4:33	Write About Love
☆	With You	👉	Chris Brown	4:12	Exclusive - The Forever Edi...

And another thing to think about is that you want to break up the poem into a short playlist.

I.e. it's better to turn "If I can't let it go out of my mind" into:

- If I can't
- Let it go
- Out of my mind

than to break it down into:

- If
- I can't
- Let
- It
- Go
- Out of
- My mind

Some things worth considering (though not necessarily crucial):

- Ideally, capitalization should not matter
- Should work for any UTF-8 string
- Given that the number of queries can be quite high for some sentences, can we do anything to improve the running time? Parallelization? Guarantee to return best effort result within x seconds?
- Can we re-use the results between sentences? (i.e. caching)
- What can we do to make the result as short as possible? Is there a way to find the "optimal" solution?
- What can we do about unmatched words? Can we minimize this, too?

Good luck!