

```
In [55]: #for mathematical computation
import numpy as np
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
%matplotlib inline
```

```
In [33]: df_track = pd.read_csv('Tracks.csv')
df_track.head()
```

```
Out[33]:
```

	genre	artist_name	track_name	track_id	popularity	acousticness
0	Movie	Henri Salvador	C'est beau de faire un Show	0BRjO6ga9RKCKjfDqeFgWV	0	0.611
1	Movie	Martin & les fées	Perdu d'avance (par Gad Elmaleh)	0BjC1NfoEEOusryehmNudP	1	0.246
2	Movie	Joseph Williams	Don't Let Me Be Lonely Tonight	0CoSDzoNIKCRs124s9uTVy	3	0.952
3	Movie	Henri Salvador	Dis-moi Monsieur Gordon Cooper	0Gc6TVm52BwZD07Ki6tlvf	0	0.703
4	Movie	Fabien Nataf	Ouverture	0luslXpMROHdEPvSI1fTQK	4	0.950

```
In [34]: #data Info
df_track.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 232725 entries, 0 to 232724
Data columns (total 18 columns):
#   Column                Non-Null Count  Dtype
---  -
0   genre                 232725 non-null object
1   artist_name          232725 non-null object
2   track_name           232725 non-null object
3   track_id             232725 non-null object
4   popularity            232725 non-null int64
5   acousticness         232725 non-null float64
6   danceability          232725 non-null float64
7   duration_ms          232725 non-null int64
8   energy               232725 non-null float64
9   instrumentalness      232725 non-null float64
10  key                   232725 non-null object
11  liveness              232725 non-null float64
12  loudness              232725 non-null float64
13  mode                  232725 non-null object
14  speechiness           232725 non-null float64
15  tempo                 232725 non-null float64
16  time_signature        232725 non-null object
17  valence               232725 non-null float64
dtypes: float64(9), int64(2), object(7)
memory usage: 32.0+ MB
```

```
In [35]: #Checking The Null Values
df_track.isnull().sum()
```

```
Out[35]: genre                0
artist_name              0
track_name               0
track_id                 0
popularity               0
acousticness             0
danceability             0
duration_ms              0
energy                   0
instrumentalness         0
key                      0
liveness                 0
loudness                 0
mode                     0
speechiness              0
tempo                    0
time_signature           0
valence                  0
dtype: int64
```

```
In [17]: df_most_popular_sorted = df_track.sort_values('popularity',ascending = Fa
df_most_popular_sorted
```

Out[17]:

	genre	artist_name	track_name	track_id	popularity	ac
9027	Dance	Ariana Grande	7 rings	14msK75pk3pA33pzPVNtBF	100	
107804	Pop	Ariana Grande	7 rings	14msK75pk3pA33pzPVNtBF	100	
86951	Rap	Post Malone	Wow.	6MWtB6iiXylwun0YzU6DFP	99	
107803	Pop	Post Malone	Wow.	6MWtB6iiXylwun0YzU6DFP	99	
107802	Pop	Ariana Grande	break up with your girlfriend, i'm bored	4kV4N9D1iIKVxx1KLvtTpjS	99	
9026	Dance	Ariana Grande	break up with your girlfriend, i'm bored	4kV4N9D1iIKVxx1KLvtTpjS	99	
66643	Hip-Hop	Daddy Yankee	Con Calma	5w9c2J52mkdntK0mRLeM2m	98	
107909	Pop	Daddy Yankee	Con Calma	5w9c2J52mkdntK0mRLeM2m	98	
138918	Reggaeton	Daddy Yankee	Con Calma	5w9c2J52mkdntK0mRLeM2m	98	
107829	Pop	Ava Max	Sweet but Psycho	25sgk305KZfyuqVBQlahim	97	

```
In [36]: most_popular = df_track.query('popularity > 90', inplace = False).sort_val
most_popular[:10]
```

Out [36]:

	genre	artist_name	track_name	track_id	popularity	ac
107804	Pop	Ariana Grande	7 rings	14msK75pk3pA33pzPVNtBF	100	
9027	Dance	Ariana Grande	7 rings	14msK75pk3pA33pzPVNtBF	100	
9026	Dance	Ariana Grande	break up with your girlfriend, i'm bored	4kV4N9D1iKVxx1KLvtTpjS	99	
86951	Rap	Post Malone	Wow.	6MWtB6iiXylwun0YzU6DFP	99	
107803	Pop	Post Malone	Wow.	6MWtB6iiXylwun0YzU6DFP	99	
107802	Pop	Ariana Grande	break up with your girlfriend, i'm bored	4kV4N9D1iKVxx1KLvtTpjS	99	
138918	Reggaeton	Daddy Yankee	Con Calma	5w9c2J52mkdntKOmRLeM2m	98	
66643	Hip-Hop	Daddy Yankee	Con Calma	5w9c2J52mkdntKOmRLeM2m	98	
107909	Pop	Daddy Yankee	Con Calma	5w9c2J52mkdntKOmRLeM2m	98	
86953	Rap	Post Malone	Sunflower - Spider-Man: Into the Spider-Verse	3KkXRkHbMCARz0aVfEt68P	97	

In [38]:

```
df_track.head()
```

Out[38]:

	genre	artist_name	track_name	track_id	popularity	acousticness
0	Movie	Henri Salvador	C'est beau de faire un Show	0BRjO6ga9RKCKjfDqeFgWV	0	0.611
1	Movie	Martin & les fées	Perdu d'avance (par Gad Elmaleh)	0BjC1NfoEOOusryehmNudP	1	0.246
2	Movie	Joseph Williams	Don't Let Me Be Lonely Tonight	0CoSDzoNIKCRs124s9uTVy	3	0.952
3	Movie	Henri Salvador	Dis-moi Monsieur Gordon Cooper	0Gc6TVm52BwZD07Ki6tlvf	0	0.703
4	Movie	Fabien Nataf	Ouverture	0lusIXpMROHdEPvSI1fTQK	4	0.950

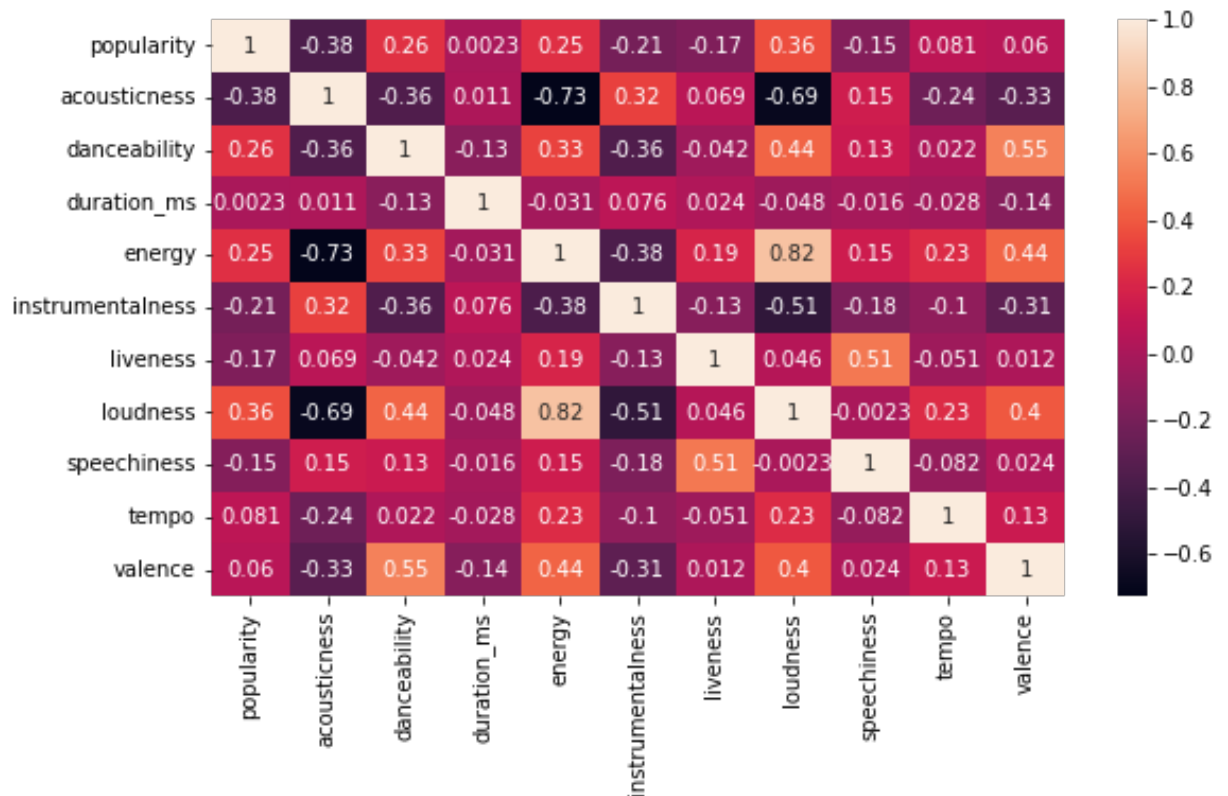
In [43]: `df_most_popular_sorted = df_track.sort_values('popularity', ascending = False)`
`df_most_popular_sorted`

Out[43]:

	genre	artist_name	track_name	track_id	popularity	acousticness
9027	Dance	Ariana Grande	7 rings	14msK75pk3pA33pzPVNtBF	100	
107804	Pop	Ariana Grande	7 rings	14msK75pk3pA33pzPVNtBF	100	
86951	Rap	Post Malone	Wow.	6MWtB6iiXylwun0YzU6DFP	99	
107803	Pop	Post Malone	Wow.	6MWtB6iiXylwun0YzU6DFP	99	
107802	Pop	Ariana Grande	break up with your girlfriend, i'm bored	4kV4N9D1iKVxx1KLvtTpjS	99	
9026	Dance	Ariana Grande	break up with your girlfriend, i'm bored	4kV4N9D1iKVxx1KLvtTpjS	99	
66643	Hip-Hop	Daddy Yankee	Con Calma	5w9c2J52mkdntKOmRLeM2m	98	
107909	Pop	Daddy Yankee	Con Calma	5w9c2J52mkdntKOmRLeM2m	98	
138918	Reggaeton	Daddy Yankee	Con Calma	5w9c2J52mkdntKOmRLeM2m	98	
107829	Pop	Ava Max	Sweet but Psycho	25sgk305KZfyuqVBQlahim	97	

```
In [58]: plt.figure(figsize=(9,5))
sns.heatmap(df.corr(), annot= True)
```

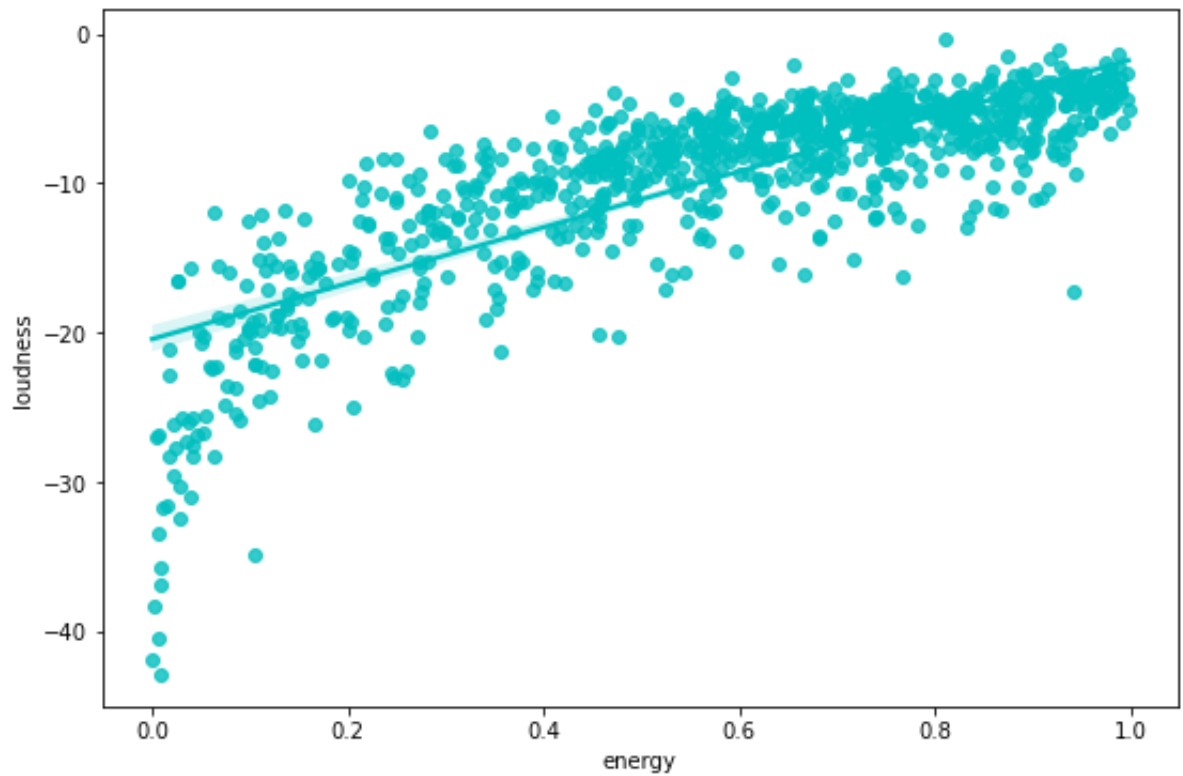
```
Out[58]: <AxesSubplot:>
```



```
In [59]: sample_df = df_track.sample(int(0.004 * len(df_track)))
```

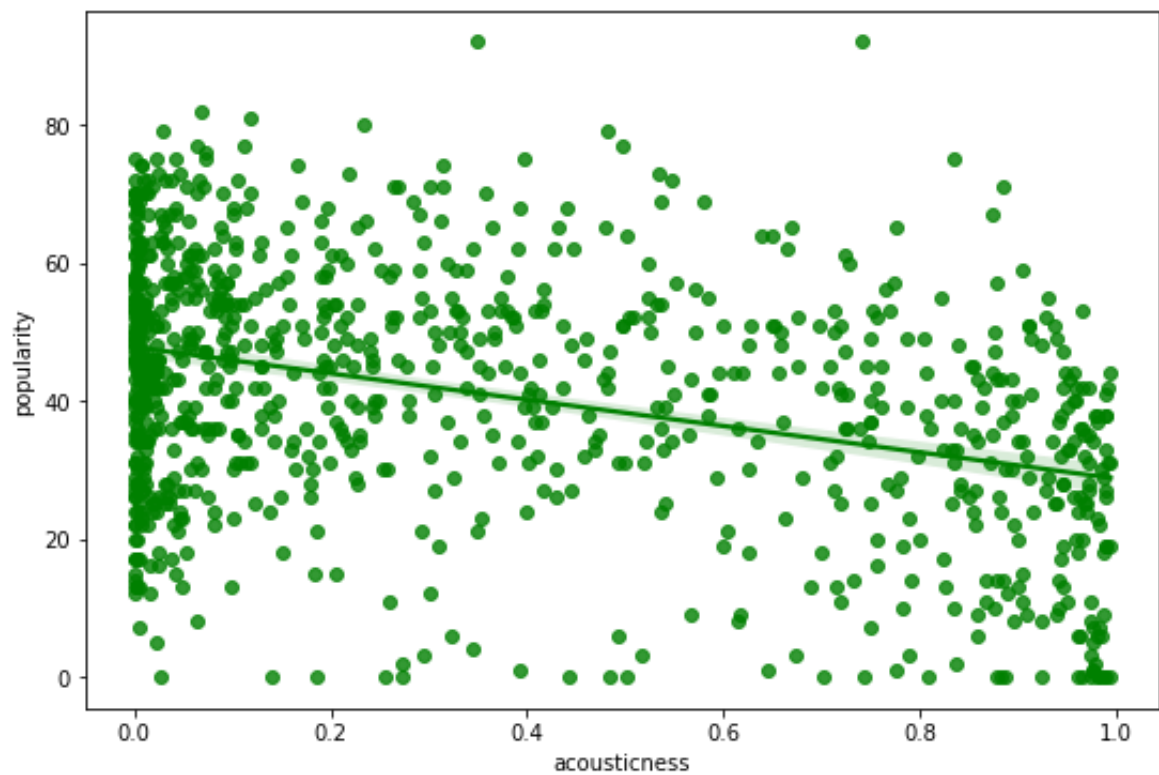
```
In [60]: plt.figure(figsize = [9, 6])
sns.regplot(data = sample_df, y = 'loudness', x = 'energy', color = 'c')
```

```
Out[60]: <AxesSubplot:xlabel='energy', ylabel='loudness'>
```



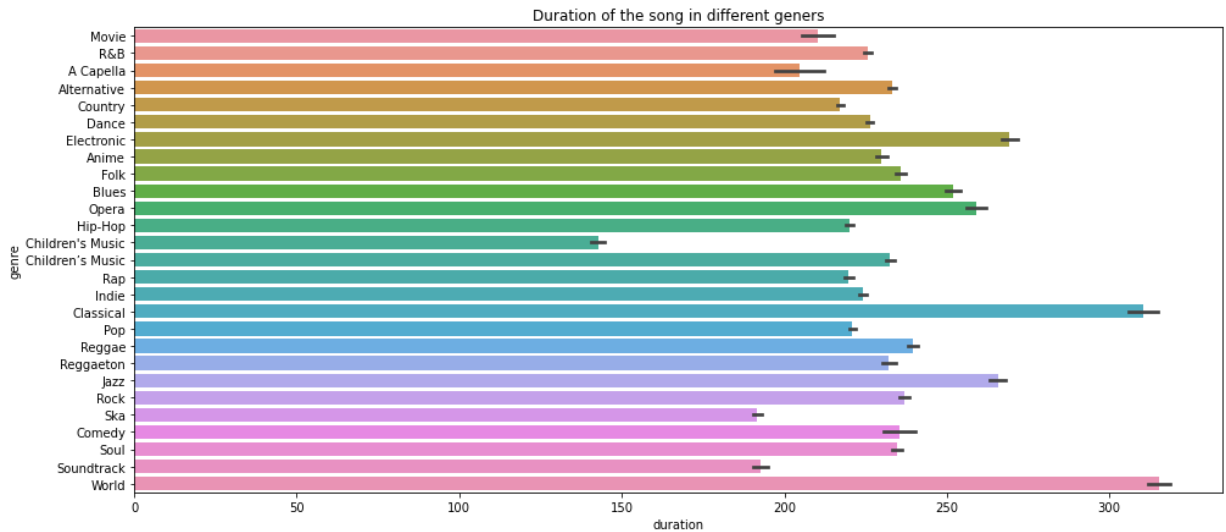
```
In [61]: plt.figure(figsize = [9,6])  
sns.regplot(data = sample_df, y = 'popularity', x = 'acousticness', color
```

```
Out[61]: <AxesSubplot:xlabel='acousticness', ylabel='popularity'>
```



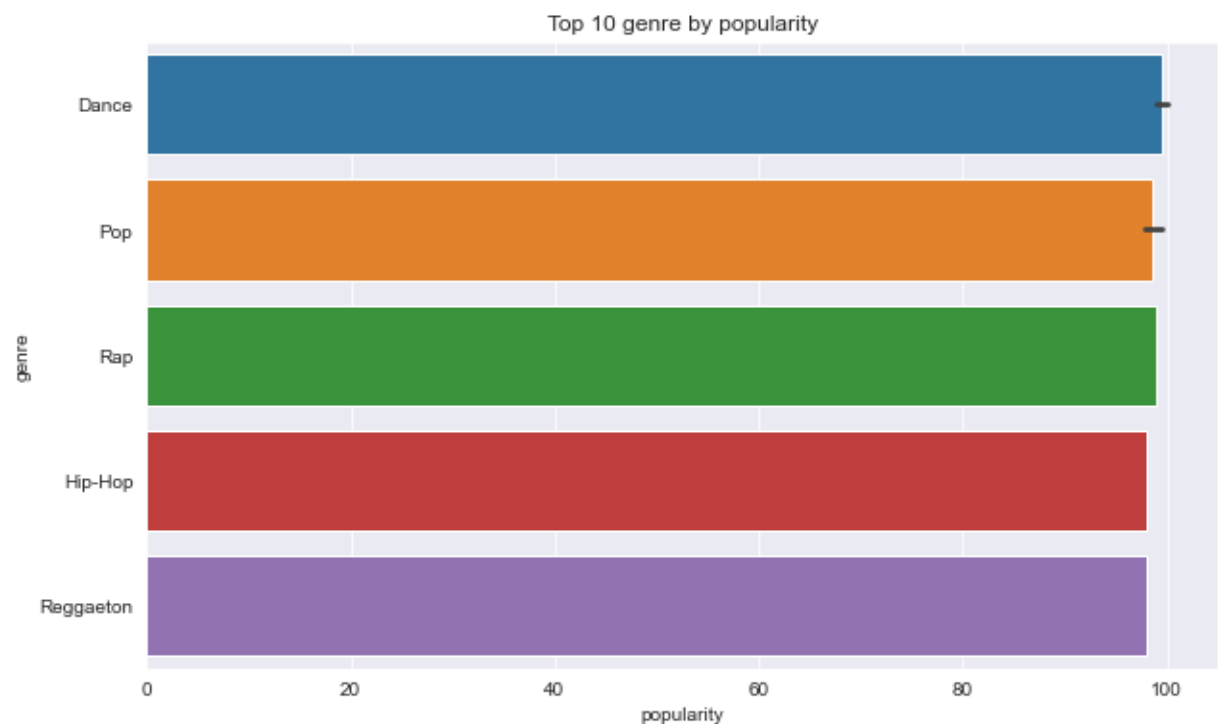
```
In [62]: plt.figure(figsize = [16,7])
plt.title('Duration of the song in different genres')
sns.color_palette('rocket', as_cmap = True)
sns.barplot(y = 'genre', x = 'duration', data = df_track)
```

```
Out[62]: <AxesSubplot:title={'center':'Duration of the song in different genres'},
xlabel='duration', ylabel='genre'>
```



```
In [63]: sns.set_style(style = 'darkgrid')
plt.figure(figsize = [10,6])
most_popular_genres = df_track.sort_values('popularity',ascending = False)
sns.barplot(y = 'genre', x = 'popularity', data = most_popular_genres).set
```

```
Out[63]: [Text(0.5, 1.0, 'Top 10 genre by popularity')]
```



```
In [ ]:
```