Grammy Awards Analysis

Introduction

The Grammy Awards, presented by The Recording Academy, are accolades recognizing outstanding achievement in the music industry. They are considered one of the most prestigious awards in the music industry.

History

- **First Grammy Awards:** The first Grammy Awards ceremony was held on May 4, 1959. The awards were established to honor artistic and technical excellence in the recording industry.

- **First Person to Win:** The first person to win a Grammy Award was the American composer and conductor, Henry Mancini. He won the award for Album of the Year for his work on the soundtrack of the film "The Music from Peter Gunn."
- **First Woman to Win:** The first woman to win a Grammy Award was Ella Fitzgerald. She won the award for Best Individual Jazz Performance for her song "Ella Fitzgerald Sings the Duke Ellington Song Book" in 1959.
- **First Black Person to Win:** The first black person to win a Grammy Award was Count Basie. He won the award for Best Performance by a Dance Band for his album "Basie" in 1959.

Project Objectives

- **Explore Grammy Awards:** Gain insights into the Grammy Awards, artists, and their achievements.
- **Analyze Artists' Representation:** Examine the representation of artists by race in Grammy nominations and awards.
- **Understand Rolling Stone Rankings:** Analyze the rankings of artists according to Rolling Stone.
- **Examine Best Albums of All Time:** Explore the best albums of all time and their characteristics.
- **Investigate Best Record Categories:** Analyze the best records by genre and artist.
- **Explore Artists' Earnings:** Investigate the earnings of artists and countries in the music industry.

Project Methodology

- **Data Collection:** Data on Grammy Awards, artists, nominations, awards, Rolling Stone rankings, best albums, best records, streamed artists, and earnings were collected.
- **Data Analysis:** Matplotlib and Pandas were used for exploratory data analysis (EDA).
- **Findings:** Various aspects of the Grammy Awards and the music industry were analyzed.

In [ ]:
```
#importing the necessary dependencies
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
```

In [ ]:
```
artists = pd.read_csv("C:\\Datasets\\grammys\\best artists_RS.csv")
bestalbum =pd.read_csv("C:\\Datasets\\grammys\\grammys-best album.csv")
bestrecord = pd.read_csv("C:\\Datasets\\grammys\\grammys-best record.csv")
moneymakers = pd.read_csv("C:\\Datasets\\grammys\\money-makers-bb.csv")
rich = pd.read_csv("C:\\Datasets\\grammys\\richest musicians by year.csv")
```

In [ ]:
```
rich.head()
```

Out[ ]:

	Year	Musician	Nationality	Earnings (Millions)	Adjusted earnings\n(in 2023 dollar)
0	1987	Bruce Springsteen	United States	$56	134
1	1988	Michael Jackson *	United States	$97	222
2	1989	Michael Jackson *	United States	$125	273
3	1990	Michael Jackson	United States	$100	207
4	1991	New Kids on the Block *	United States	$115	229

In [ ]:
```
dfs = [artists,bestalbum,bestrecord,moneymakers,rich]
```

In [ ]:
```
def first_analysis(df):
    print("/n")
    print(f"The general description is :{df.info()}")
    print("/n")
    print(f"The statistical info for the numeric columns is :{df.describe()}")
```

In [ ]:
```
artists.head(10)
```

Out[ ]:

	Rolling Stone Magazine Rank	Artist	Racial/Ethnic group	Main Grammy awards	Main Grammy Nominations	Total Awards	Total Nominations	UK number 1's
0	1	The Beatles	White/European	2	10	14	29	17
1	2	Bob Dylan	White/European	1	4	10	38	1
2	3	Elvis Presley	White/European	0	2	2	4	21
3	4	The Rolling Stones	White/European	0	1	4	14	8
4	5	Chuck Berry	Black/African	0	0	0	0	1
5	6	Jimi Hendrix	Black/African	0	0	0	1	0
6	7	James Brown	Black/African	0	0	3	8	0
7	8	Little Richard	Black/African	0	0	0	0	0
8	9	Aretha Franklin	Black/African	0	0	18	44	1
9	10	Ray Charles	Black/African	2	6	17	37	1

In [ ]:
```
artists.sort_values(by='Main Grammy awards',ascending=False)
```

Out[ ]:

	Rolling Stone Magazine Rank	Artist	Racial/Ethnic group	Main Grammy awards	Main Grammy Nominations	Total Awards	Total Nominations	UK number 1's
21	22	U2	White/European	6	11	22	46	7
54	55	Eric Clapton	White/European	5	6	17	37	0
39	40	Simon & Garfunkel	White/European	3	4	7	11	1
14	15	Stevie Wonder	Black/African	3	8	25	74	2
34	35	Michael Jackson	Black/African	3	8	13	38	7
...	...	...	...	...	...	...	...	...
32	33	Everly Brothers	White/European	0	0	0	4	4
31	32	Smokey Robinson & The Miracles	Black/African	0	0	0	1	0
30	31	Johnny Cash	White/European	0	2	13	35	0
29	30	Nirvana	White/European	0	0	1	6	0
99	100	Talking Heads	White/European	0	0	0	2	0

100 rows × 8 columns

In [ ]:
```
artists.head(10)
```

Out[ ]:

	Rolling Stone Magazine Rank	Artist	Racial/Ethnic group	Main Grammy awards	Main Grammy Nominations	Total Awards	Total Nominations	UK number 1's
0	1	The Beatles	White/European	2	10	14	29	17
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3	4	The Rolling Stones	White/European	0	1	4	14	8
4	5	Chuck Berry	Black/African	0	0	0	0	1
5	6	Jimi Hendrix	Black/African	0	0	0	1	0
6	7	James Brown	Black/African	0	0	3	8	0
7	8	Little Richard	Black/African	0	0	0	0	0
8	9	Aretha Franklin	Black/African	0	0	18	44	1
9	10	Ray Charles	Black/African	2	6	17	37	1

In [ ]:
```
def artist_appearance(column,df):
    print (f"The artist has appeared:{df[column].value_counts().head(10)}")
```

In [ ]:
```
artist_appearance('Artist',artists)
# The artists are equally distributed in our datasets
```

```
The artist has appeared:The Beatles        1
Phil Spector       1
Hank Williams      1
Radiohead          1
AC/DC              1
Frank Zappa        1
The Police         1
Jackie Wilson      1
The Temptations    1
Cream              1
Name: Artist, dtype: int64
```

In [ ]:
```
artists.nunique()
```

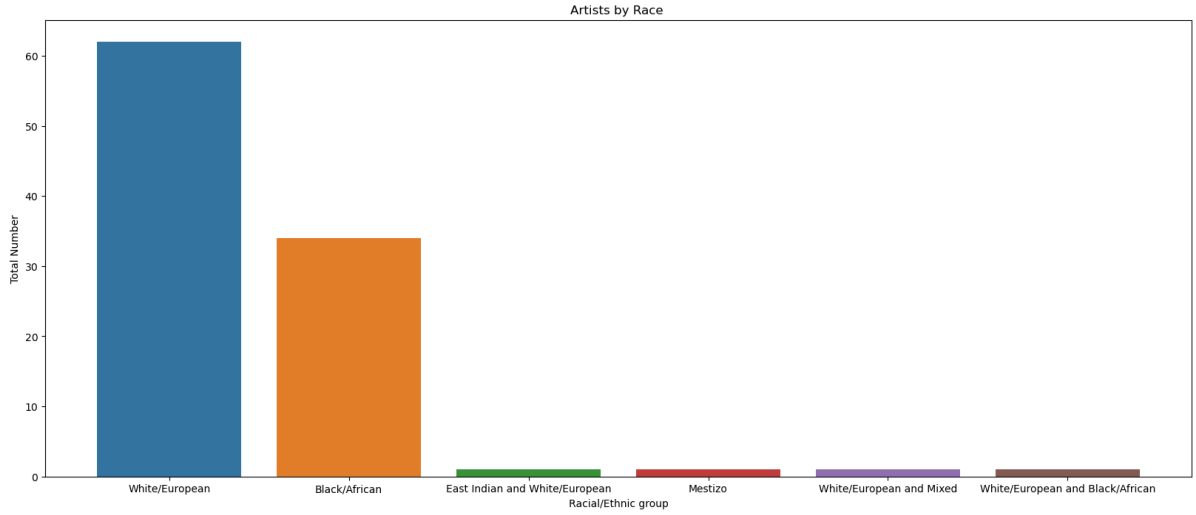
Out[ ]:
```
Rolling Stone Magazine Rank    100
Artist                         100
Racial/Ethnic group              6
Main Grammy awards               6
Main Grammy Nominations         12
Total Awards                    19
Total Nominations               33
UK number 1's                   13
dtype: int64
```

In [ ]:
```
artists.columns
```

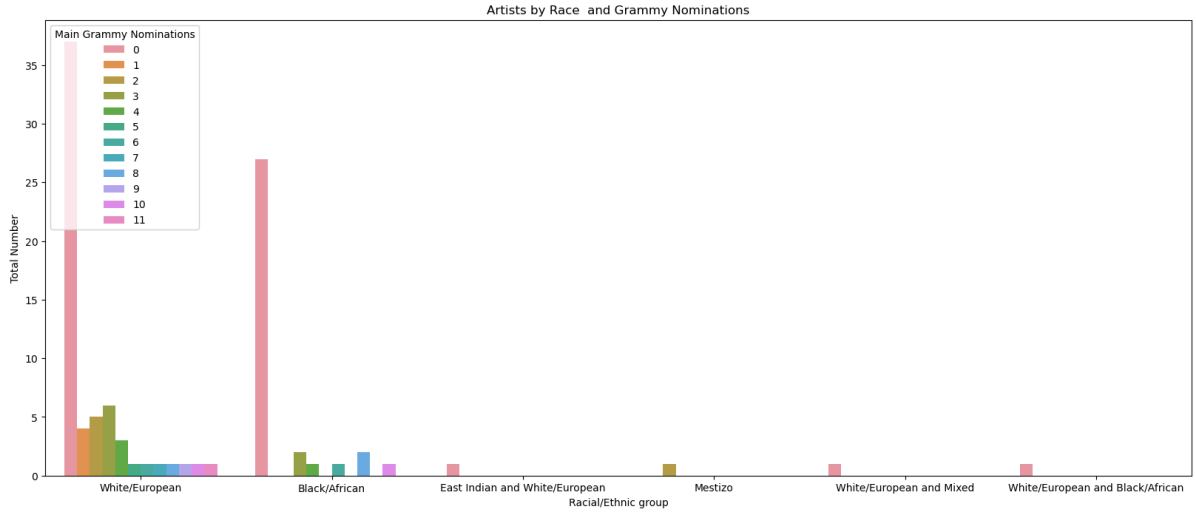
Out[ ]:
```
Index(['Rolling Stone Magazine Rank', 'Artist', 'Racial/Ethnic group',
       'Main Grammy awards', 'Main Grammy Nominations', 'Total Awards',
       'Total Nominations', 'UK number 1's'],
      dtype='object')
```

In [ ]:
```
#Artists by Race
plt.figure(figsize=(20,8))
sns.countplot(x='Racial/Ethnic group',data=artists)
plt.ylabel("Total Number")
plt.title('Artists by Race ')
plt.plot()
# Interesting to see White and Blacks competing for the best spots
```

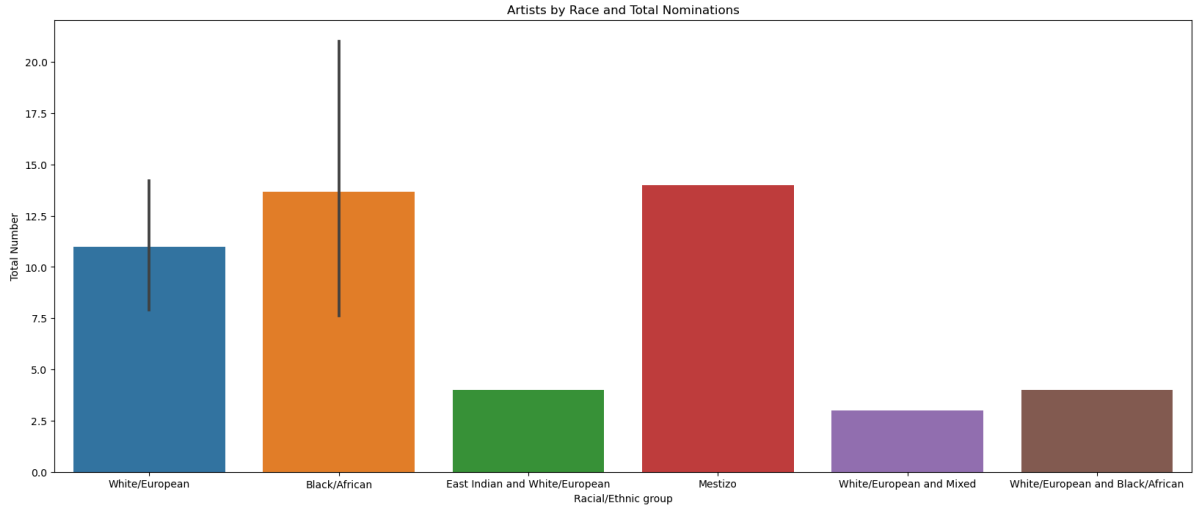
Out[ ]:
```
[]
```



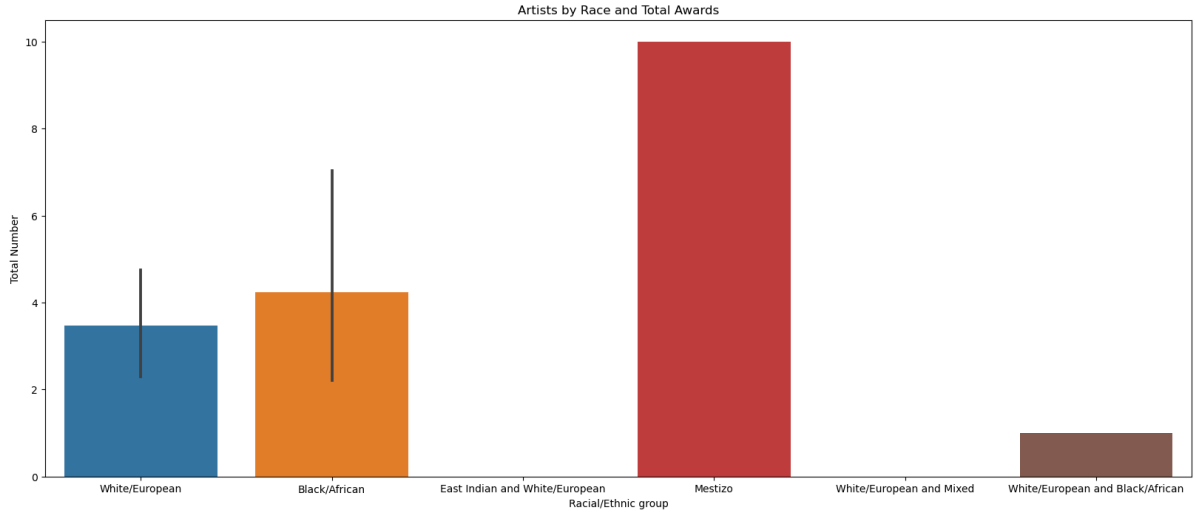
In [ ]:
```
plt.figure(figsize=(20,8))
sns.countplot(x='Racial/Ethnic group',hue='Main Grammy Nominations',data=artists)
plt.ylabel("Total Number")
plt.title('Artists by Race  and Grammy Nominations')
plt.show()
# Mestizos have more nominations than Blacks and Whites
```



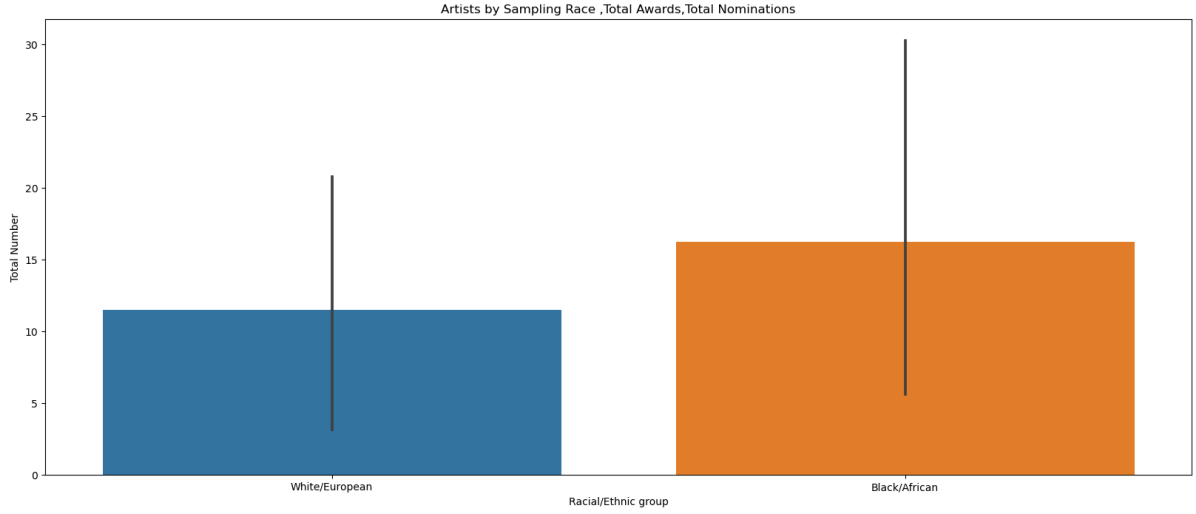
In [ ]:
```
plt.figure(figsize=(20,8))
sns.barplot(x='Racial/Ethnic group',y='Total Nominations',data=artists)
plt.ylabel("Total Number")
plt.title('Artists by Race and Total Nominations')
plt.show()
# blacks have the most nominations equally with Mestizos
```



In [ ]:
```
plt.figure(figsize=(20,8))
sns.barplot(x='Racial/Ethnic group',y='Total Awards',data=artists)
plt.ylabel("Total Number")
plt.title('Artists by Race and Total Awards')
plt.show()
# Mestizos have domnated the total awards in the grammys
```



In [ ]:
```
plt.figure(figsize=(20,8))
sns.barplot(x='Racial/Ethnic group',y='Total Nominations',data=artists.head(20))
plt.title('Artists by Sampling Race ,Total Awards,Total Nominations')
plt.ylabel("Total Number")
plt.show()
# bearing in mind the ranking by Rolling stone magazine
```



STUDYING INDIVIDUAL ARTISTS BASED ON ROLLING STONE RANKS

In [ ]:
```
artists.head(10)
```

Out[ ]:

	Rolling Stone Magazine Rank	Artist	Racial/Ethnic group	Main Grammy awards	Main Grammy Nominations	Total Awards	Total Nominations	UK number 1's
0	1	The Beatles	White/European	2	10	14	29	17
1	2	Bob Dylan	White/European	1	4	10	38	1
2	3	Elvis Presley	White/European	0	2	2	4	21
3	4	The Rolling Stones	White/European	0	1	4	14	8
4	5	Chuck Berry	Black/African	0	0	0	0	1
5	6	Jimi Hendrix	Black/African	0	0	0	1	0
6	7	James Brown	Black/African	0	0	3	8	0
7	8	Little Richard	Black/African	0	0	0	0	0
8	9	Aretha Franklin	Black/African	0	0	18	44	1
9	10	Ray Charles	Black/African	2	6	17	37	1

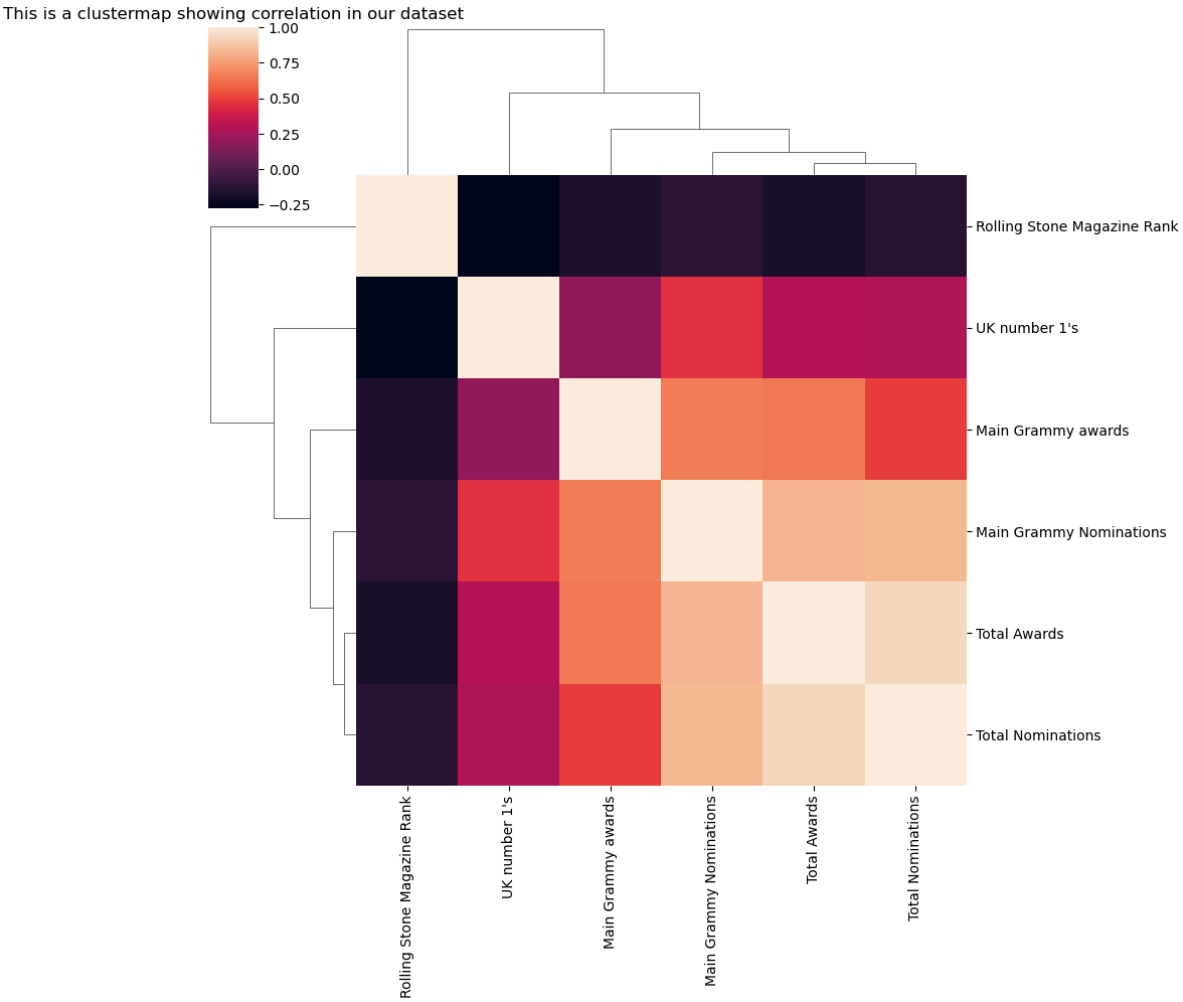
In [ ]:
```
correlation = artists.corr()
correlation
```

Out[ ]:

	Rolling Stone Magazine Rank	Main Grammy awards	Main Grammy Nominations	Total Awards	Total Nominations	UK number 1's
Rolling Stone Magazine Rank	1.000000	-0.156424	-0.107496	-0.178521	-0.138243	-0.275214
Main Grammy awards	-0.156424	1.000000	0.660779	0.648050	0.496426	0.191601
Main Grammy Nominations	-0.107496	0.660779	1.000000	0.821369	0.830764	0.463741
Total Awards	-0.178521	0.648050	0.821369	1.000000	0.930443	0.288506
Total Nominations	-0.138243	0.496426	0.830764	0.930443	1.000000	0.278109
UK number 1's	-0.275214	0.191601	0.463741	0.288506	0.278109	1.000000

In [ ]:

```
sns.clustermap(correlation)
plt.title('This is a clustermap showing correlation in our dataset')
plt.show()
# The rolling stone rank is negative correlated with all our features and so it is
```



RANKING ARTISTS BEST ON TOTAL AWARDS

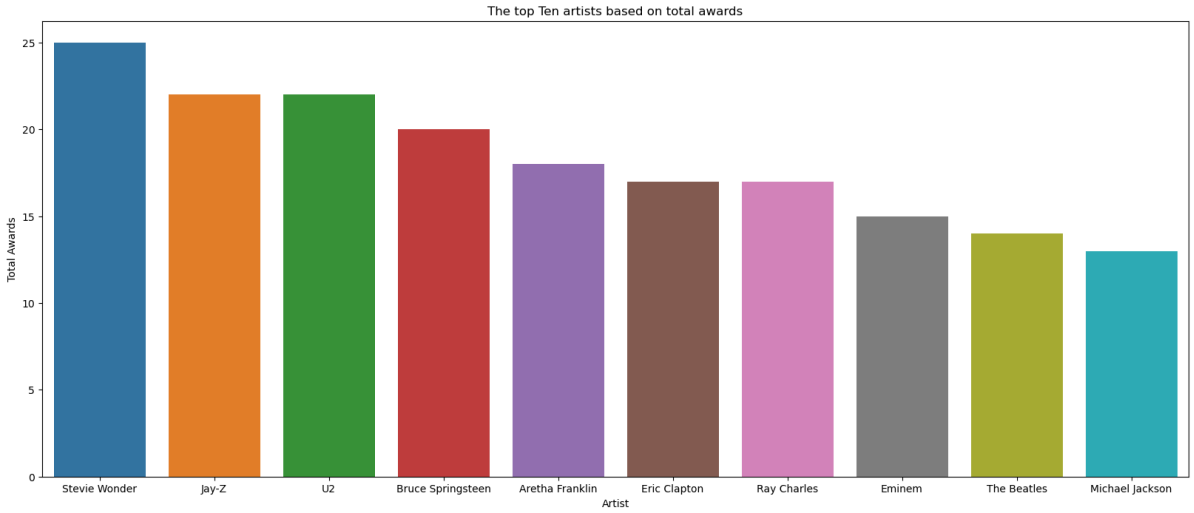
In [ ]:
```
artists.head()
```

Out[ ]:

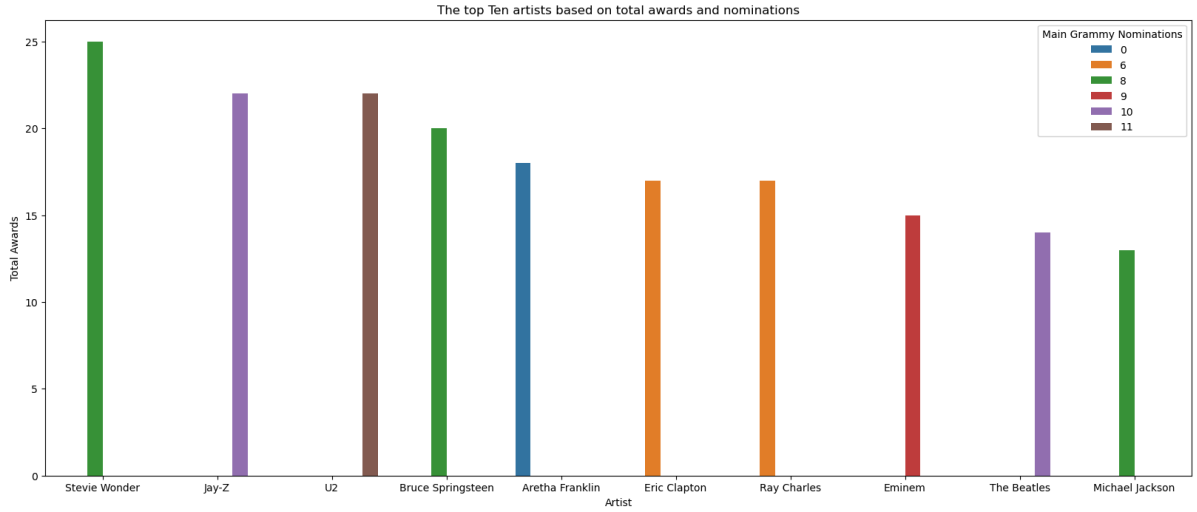
	Rolling Stone Magazine Rank	Artist	Racial/Ethnic group	Main Grammy awards	Main Grammy Nominations	Total Awards	Total Nominations	UK number 1's
0	1	The Beatles	White/European	2	10	14	29	17
1	2	Bob Dylan	White/European	1	4	10	38	1
2	3	Elvis Presley	White/European	0	2	2	4	21
3	4	The Rolling Stones	White/European	0	1	4	14	8
4	5	Chuck Berry	Black/African	0	0	0	0	1

In [ ]:
```
artists.sort_values(by='Total Awards',ascending=False,inplace=True)
```

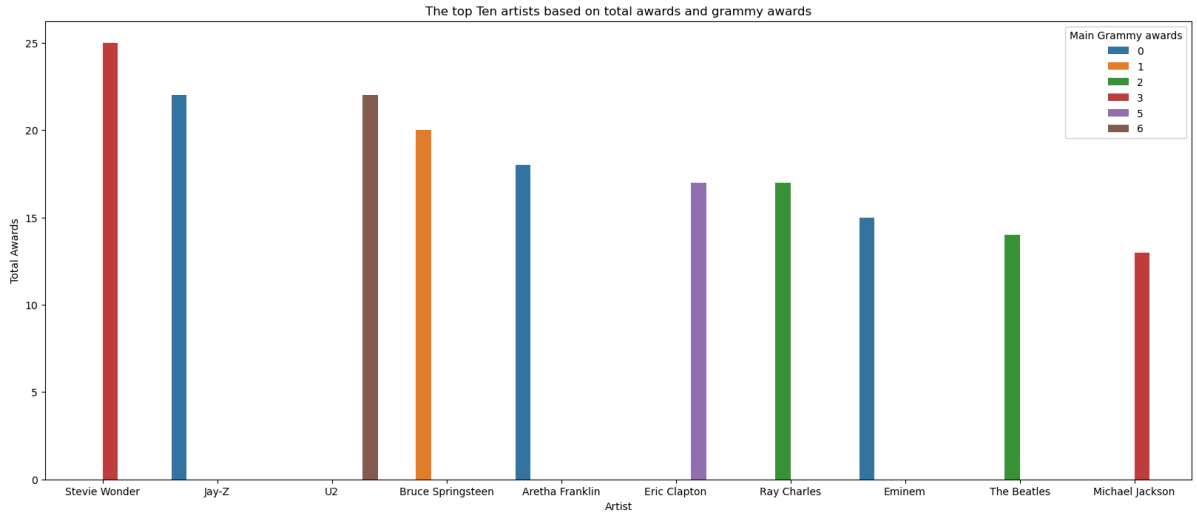
In [ ]:
```
plt.figure(figsize=(20,8))
sns.barplot(x='Artist',y='Total Awards',data=artists.head(10))
plt.title('The top Ten artists based on total awards')
plt.show()
```



In [ ]:
```
plt.figure(figsize=(20,8))
sns.barplot(x='Artist',y='Total Awards',hue='Main Grammy Nominations',data=artists.
plt.title('The top Ten artists based on total awards and nominations')
plt.show()
# Stevie wonder has won the most grammys nominations and most awards ,Jay Z follows
```



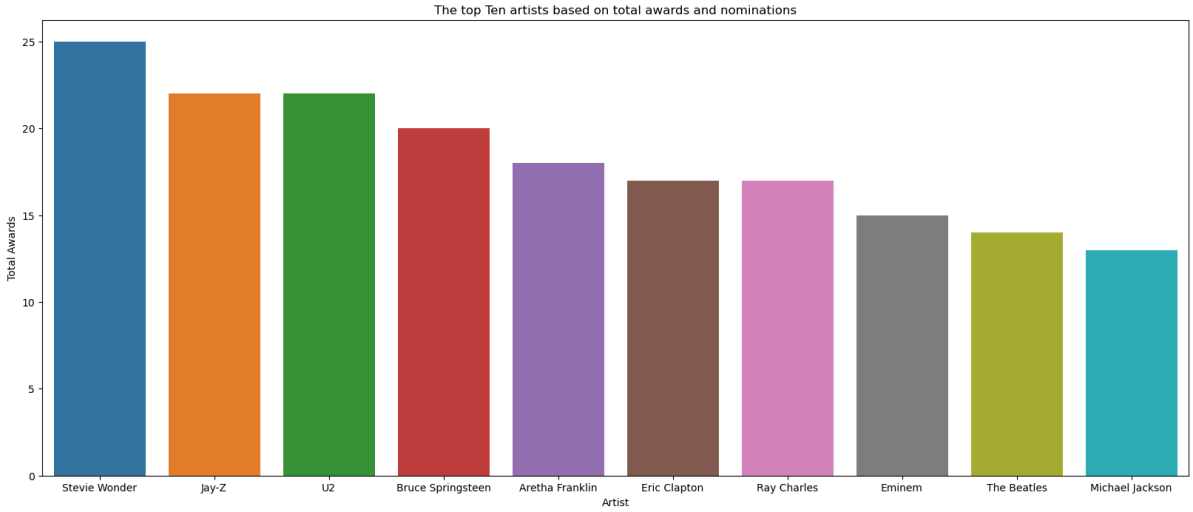
In [ ]:
```
plt.figure(figsize=(20,8))
sns.barplot(x='Artist',y='Total Awards',hue='Main Grammy awards',data=artists.head(
plt.title('The top Ten artists based on total awards and grammy awards')
plt.show()
```



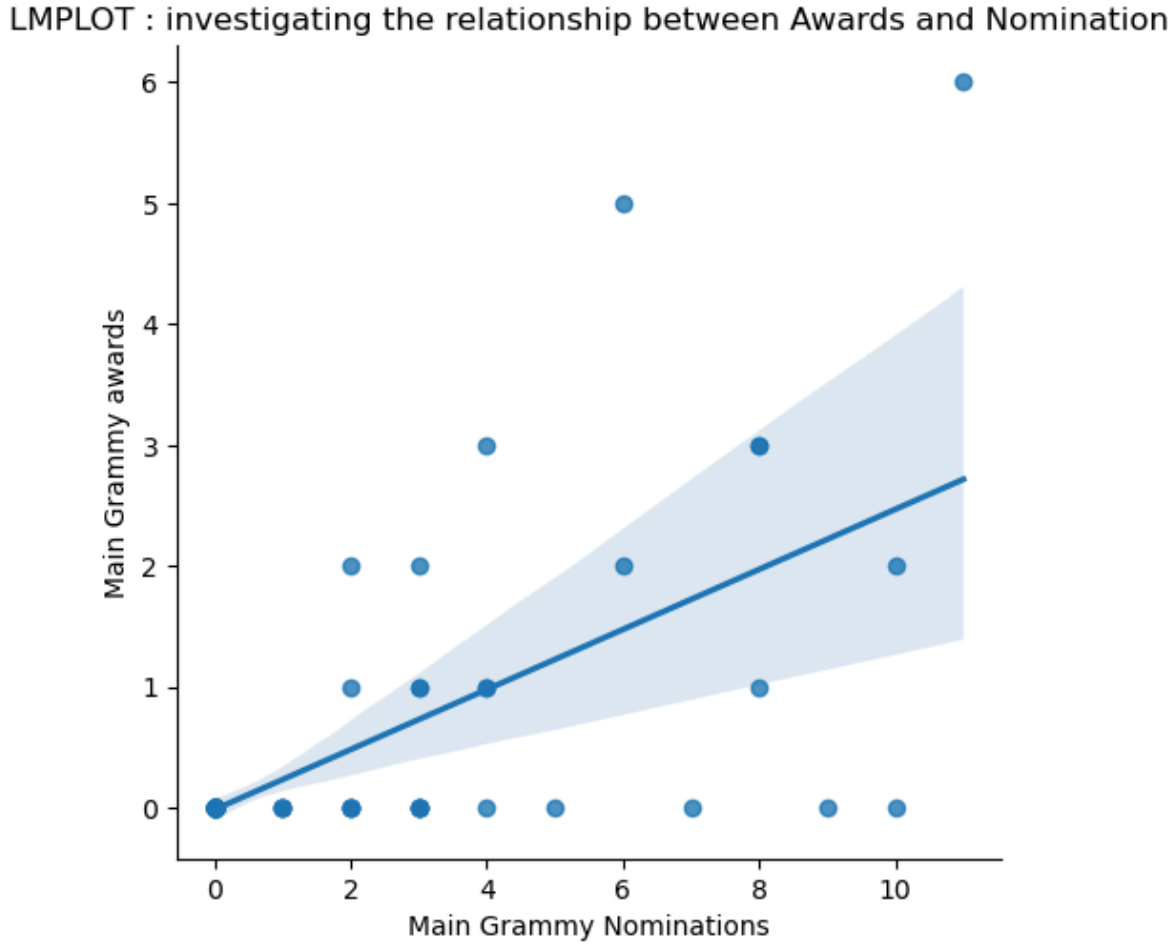
In [ ]:
```
artists.columns
```

Out[ ]:
```
Index(['Rolling Stone Magazine Rank', 'Artist', 'Racial/Ethnic group',
       'Main Grammy awards', 'Main Grammy Nominations', 'Total Awards',
       'Total Nominations', 'UK number 1's'],
      dtype='object')
```

In [ ]:
```
plt.figure(figsize=(20,8))
sns.barplot(x='Artist',y='Total Awards',data=artists.head(10))
plt.title('The top Ten artists based on total awards and nominations')
plt.show()
```



In [ ]:
```
# IS THERE A RELATIONSHIP BETWEEN TOTAL NOMINATIONS AND TOTAL GRAMMY AWARDS
sns.lmplot(y='Main Grammy awards',x='Main Grammy Nominations',data=artists)
plt.title('LMPLOT : investigating the relationship between Awards and Nomination')
plt.show()
# THERE ARE MANY OUTLIERS ,there indeed exists a relationship but it is feeble
```



ANALYSIS OF THE BEST ALBUMS IN THE GRAMMYS

In [ ]:
```
dfs[1]
```

Out[ ]:

	Year	Artist	Work	City/town of birth/origin	US State of birth/origin	Country of birth/origin	Racial/Ethnic group
0	1959.0	Henry Mancini	The Music from Peter Gunn	Cleveland	Ohio	USA	White/European
1	1960.0	Frank Sinatra	Come Dance with Me!	Hoboken	New Jersey	USA	White/European
2	1961.0	Bob Newhart	The Button-Down Mind of Bob Newhart	Oak Park	Illinois	USA	White/European
3	1962.0	Judy Garland	Judy at Carnegie Hall	Grand Rapids	Minnesota	USA	White/European
4	1963.0	Vaughn Meader	The First Family	Waterville	Maine	USA	White/European
...	...	...	...	...	...	...	...
58	2014.0	Daft Punk	Random Access Memories	Paris	NaN	France	White/European
59	2015.0	Beck	Morning Phase	Los Angeles	California	USA	White/European
60	2016.0	Taylor Swift	1989	Reading	Pennsylvania	USA	White/European
61	2017.0	Adele	25	London	NaN	UK	White/European
62	2018.0	Bruno Mars	24K Magic	Honolulu	Hawaii	USA	Multiracial

63 rows × 7 columns

In [ ]:
```
bestalbum.head()
```

Out[ ]:

	Year	Artist	Work	City/town of birth/origin	US State of birth/origin	Country of birth/origin	Racial/Ethnic group
0	1959.0	Henry Mancini	The Music from Peter Gunn	Cleveland	Ohio	USA	White/European
1	1960.0	Frank Sinatra	Come Dance with Me!	Hoboken	New Jersey	USA	White/European
2	1961.0	Bob Newhart	The Button-Down Mind of Bob Newhart	Oak Park	Illinois	USA	White/European
3	1962.0	Judy Garland	Judy at Carnegie Hall	Grand Rapids	Minnesota	USA	White/European
4	1963.0	Vaughn Meader	The First Family	Waterville	Maine	USA	White/European

In [ ]:
```
artist_appearance('Artist',bestalbum)
```

```
The artist has appeared:Stevie Wonder         3
Frank Sinatra         3
U2                    2
Adele                 2
Taylor Swift          2
Paul Simon            2
Norah Jones           1
Whitney Houston[B]    1
Tony Bennett          1
Alanis Morissette     1
Name: Artist, dtype: int64
```

In [ ]:
```
bestalbum['Artist'].value_counts().head(20)
# Stevie Wonder has the most albums in the grammys chart ,Notable mentions include
```

Out[ ]:
```
Stevie Wonder                                    3
Frank Sinatra                                    3
U2                                               2
Adele                                            2
Taylor Swift                                     2
Paul Simon                                       2
Norah Jones                                      1
Whitney Houston[B]                               1
Tony Bennett                                     1
Alanis Morissette                                1
Celine Dion                                      1
Bob Dylan                                        1
Lauryn Hill                                      1
Santana                                          1
Steely Dan                                       1
Various artists[C] Produced by T Bone Burnett    1
Henry Mancini                                    1
Natalie Cole                                     1
OutKast                                          1
Ray Charles                                      1
Name: Artist, dtype: int64
```

In [ ]:
```
bestalbum.columns
```

Out[ ]:
```
Index(['Year', 'Artist', 'Work', 'City/town of birth/origin',
       'US State of birth/origin', 'Country of birth/origin',
       'Racial/Ethnic group'],
      dtype='object')
```

In [ ]:
```
artist_appearance('City/town of birth/origin',bestalbum)
# New York has the most artist in comparison to other cities
```

```
The artist has appeared:New York City    7
London           6
Hoboken          3
Liverpool        3
Saginaw          3
Newark           3
Los Angeles      2
Chicago          2
Reading          2
Dublin           2
Name: City/town of birth/origin, dtype: int64
```

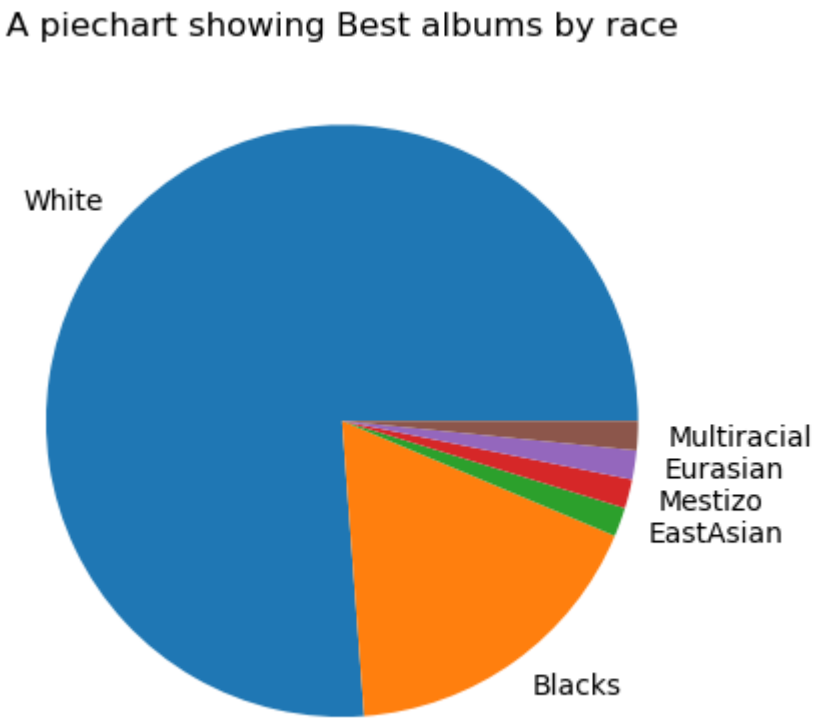
In [ ]:
```
artist_appearance('Country of birth/origin',bestalbum)
#usa has the most winners interms of best albums
```

```
The artist has appeared:USA            43
UK              11
Canada           3
Ireland          2
Brazil           1
Isle of Man      1
Japan            1
France           1
Name: Country of birth/origin, dtype: int64
```

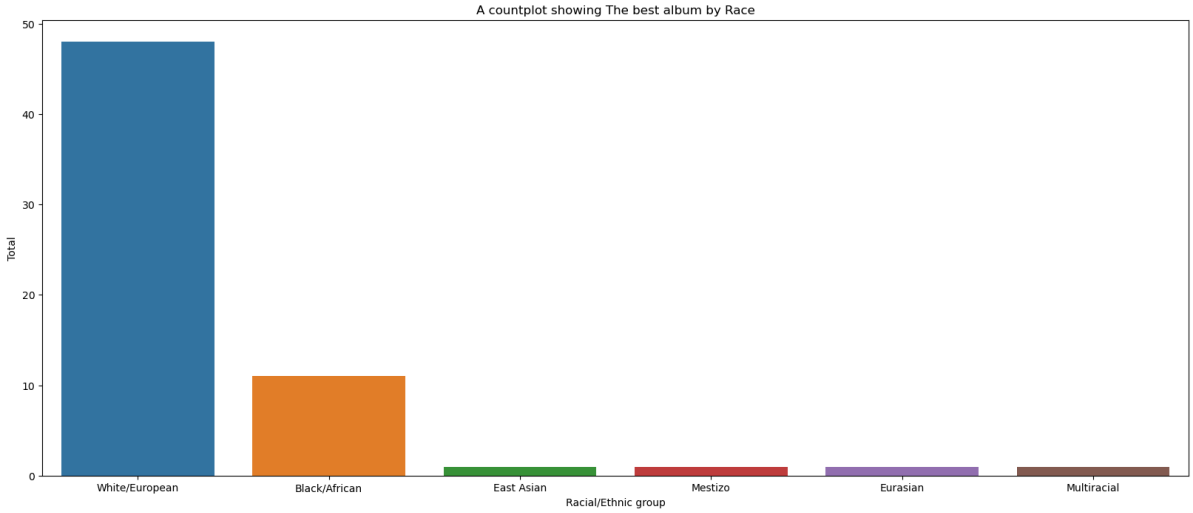
In [ ]:
```
artist_appearance('Racial/Ethnic group',bestalbum)
# wHITES DOMINATE THE CHARTS
```

```
The artist has appeared:White/European    48
Black/African     11
East Asian         1
Mestizo            1
Eurasian           1
Multiracial        1
Name: Racial/Ethnic group, dtype: int64
```

In [ ]:
```
x = [48,11,1,1,1,1]
labels =('White','Blacks','EastAsian','Mestizo','Eurasian','Multiracial')
plt.pie(x=x,labels=labels)
plt.title('A piechart showing Best albums by race')
plt.show()
```



In [ ]:
```
plt.figure(figsize=(20,8))
sns.countplot(x='Racial/Ethnic group',data=bestalbum)
plt.ylabel("Total")
plt.title('A countplot showing The best album by Race')
plt.show()
```



In [ ]:
```
bestalbum.head()
```

Out[ ]:

	Year	Artist	Work	City/town of birth/origin	US State of birth/origin	Country of birth/origin	Racial/Ethnic group
0	1959.0	Henry Mancini	The Music from Peter Gunn	Cleveland	Ohio	USA	White/European
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2	1961.0	Bob Newhart	The Button-Down Mind of Bob Newhart	Oak Park	Illinois	USA	White/European
3	1962.0	Judy Garland	Judy at Carnegie Hall	Grand Rapids	Minnesota	USA	White/European
4	1963.0	Vaughn Meader	The First Family	Waterville	Maine	USA	White/European

In [ ]:
```
bestalbum['Racial/Ethnic group'].value_counts().head(7)
```

Out[ ]:
```
White/European    48
Black/African     11
East Asian         1
Mestizo            1
Eurasian           1
Multiracial        1
Name: Racial/Ethnic group, dtype: int64
```

In [ ]:
```
total_pc= bestalbum['Racial/Ethnic group'].value_counts().sum()
```

In [ ]:
```
all_black_musicians = bestalbum[bestalbum['Racial/Ethnic group']=='Black/African'][
black_pc= all_black_musicians.value_counts().sum()
```

In [ ]:
```
whites = bestalbum[bestalbum['Racial/Ethnic group']=='White/European']['Artist']
whites
white_pc= whites.value_counts().sum()
```

In [ ]:
```
east_asian= bestalbum[bestalbum['Racial/Ethnic group']=='East Asian']['Artist']
east_asianpc = east_asian.value_counts().sum()
mestizo= bestalbum[bestalbum['Racial/Ethnic group']=='East Asian']['Artist']
```

```
mestizo_pc = mestizo.value_counts().sum()
multiracial= bestalbum[bestalbum['Racial/Ethnic group']=='Multiracial']['Artist']
multiracial_pc = east_asian.value_counts().sum()
eurasian= bestalbum[bestalbum['Racial/Ethnic group']=='Eurasian']['Artist']
eurasian_pc = eurasian.value_counts().sum()
```

In [ ]:
```
print(f"The total percentage of Whites with great albums is|{(white_pc/total_pc)*10
print(f"The total percentage of Blacks with great albums is|{(black_pc/total_pc)*10
print(f"The total percentage of East Asians with great albums is|{(east_asianpc/tot
print(f"The total percentage of Mestizos with great albums is|{(mestizo_pc/total_pc
print(f"The total percentage of MultiRacials with great albums is|{(multiracial_pc/
print(f"The total percentage of Eurasian with great albums is|{(eurasian_pc/total_p
assert white_pc!=total_pc or black_pc!=total_pc
```

```
The total percentage of Whites with great albums is|76.19047619047619%
The total percentage of Blacks with great albums is|17.46031746031746%
The total percentage of East Asians with great albums is|1.5873015873015872%
The total percentage of Mestizos with great albums is|1.5873015873015872%
The total percentage of MultiRacials with great albums is|1.5873015873015872%
The total percentage of Eurasian with great albums is|1.5873015873015872%
```

In [ ]:
```
all_us_states = bestalbum[bestalbum['US State of birth/origin']=='New Jersey']['Art
all_us_states
```

Out[ ]:
```
1          Frank Sinatra
8          Frank Sinatra
9          Frank Sinatra
18            Paul Simon
30            Paul Simon
37    Whitney Houston[B]
42           Lauryn Hill
Name: Artist, dtype: object
```

In [ ]:
```
all_new_york = bestalbum[bestalbum['US State of birth/origin']=='New York']['Artist
all_new_york
```

Out[ ]:
```
5          Barbra Streisand
12    Blood, Sweat & Tears
13       Simon & Garfunkel
14             Carole King
22              Billy Joel
38            Tony Bennett
44              Steely Dan
46             Norah Jones
Name: Artist, dtype: object
```

In [ ]:
```
def all_artists(state,df=bestalbum):
    print(f"The artist/artists from {state} is/are| {df[df['US State of birth/origi
```

In [ ]:
```
all_artists('Michigan')
```

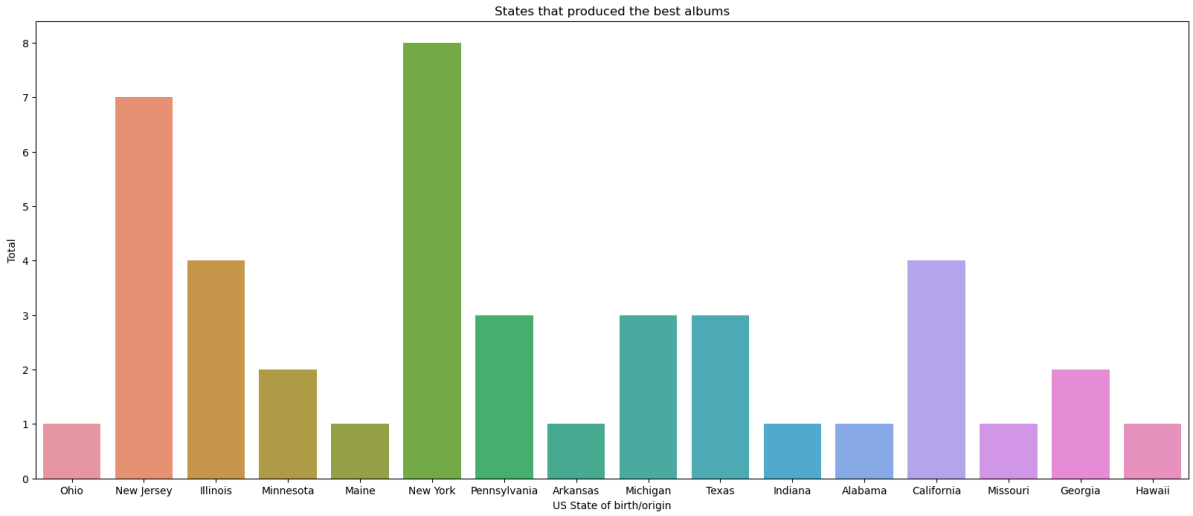
```
The artist/artists from Michigan is/are| 16    Stevie Wonder
17    Stevie Wonder
19    Stevie Wonder
Name: Artist, dtype: object
```

In [ ]:
```
bestalbum.columns
```

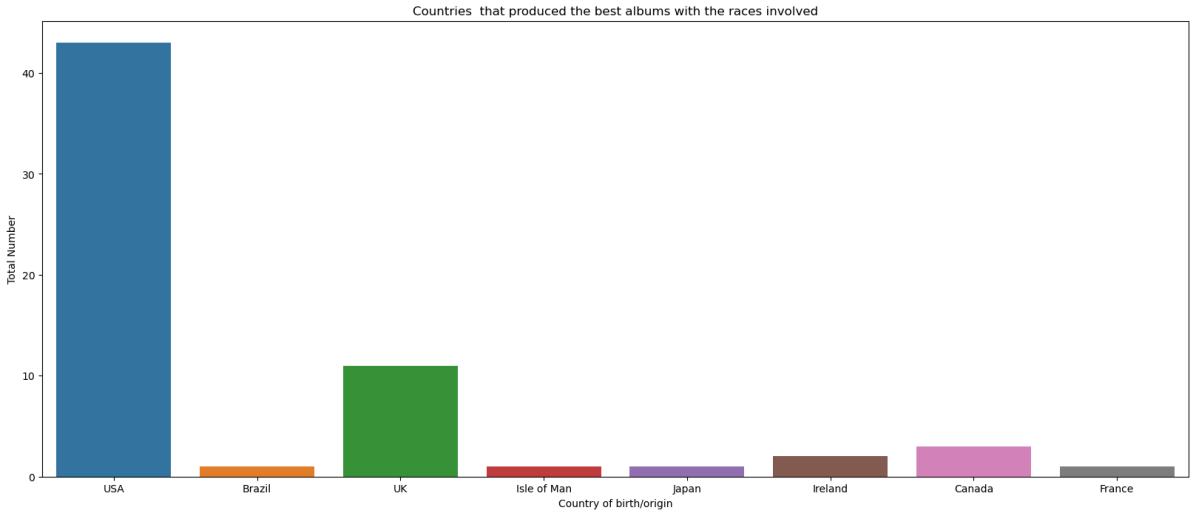
Out[ ]:
```
Index(['Year', 'Artist', 'Work', 'City/town of birth/origin',
       'US State of birth/origin', 'Country of birth/origin',
       'Racial/Ethnic group'],
      dtype='object')
```

In [ ]:
```
plt.figure(figsize=(20,8))
sns.countplot(x= 'US State of birth/origin',data=bestalbum)
```

```
plt.ylabel("Total")
plt.title('States that produced the best albums')
plt.show()
```



In [ ]:
```
plt.figure(figsize=(20,8))
sns.countplot(x='Country of birth/origin' ,data=bestalbum)
plt.title('Countries  that produced the best albums with the races involved')
plt.ylabel('Total Number')
plt.show()
# Interesting to see that usa has the most races ,with the whites being the most
```



In [ ]:
```
for column in bestalbum.columns:
      print (f"The type of {column}is {type(column)}")
```

```
The type of Yearis <class 'str'>
The type of Artistis <class 'str'>
The type of Workis <class 'str'>
The type of City/town of birth/originis <class 'str'>
The type of US State of birth/originis <class 'str'>
The type of Country of birth/originis <class 'str'>
The type of Racial/Ethnic groupis <class 'str'>
```

BEST RECORDS IN THE GRAMMYS EDA

In [ ]:
```
dfs[2]
```

Out[ ]:

	Year	Record	Artist	Genre
0	1959	Nel Blu Dipinto Di Blu (Volare)	Domenico Modugno	Balad
1	1960	Mack the Knife	Bobby Darin	Jazz
2	1961	Theme from A Summer Place	Percy Faith	Easy Listening
3	1962	Moon River	Henry Mancini	Traditional Pop
4	1963	I Left My Heart in San Francisco	Tony Bennett	Traditional Pop
...	...	...	...	...
59	2018	24K Magic	Bruno Mars	Pop
60	2019	This Is America	Childish Gambino	Rap/Hip-Hop
61	2020	Bad Guy	Billie Eilish	Pop
62	2021	Everything I Wanted	Billie Eilish	Pop
63	2022	Leave the door open	Silk Sonic	R&B

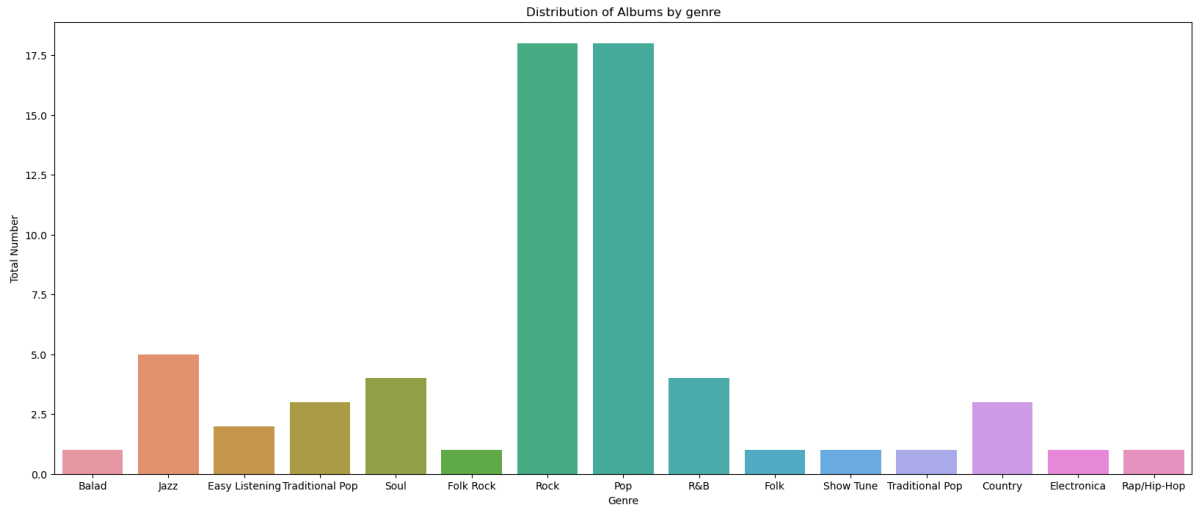
64 rows × 4 columns

In [ ]:
```
bestrecord.head()
```

Out[ ]:

	Year	Record	Artist	Genre
0	1959	Nel Blu Dipinto Di Blu (Volare)	Domenico Modugno	Balad
1	1960	Mack the Knife	Bobby Darin	Jazz
2	1961	Theme from A Summer Place	Percy Faith	Easy Listening
3	1962	Moon River	Henry Mancini	Traditional Pop
4	1963	I Left My Heart in San Francisco	Tony Bennett	Traditional Pop

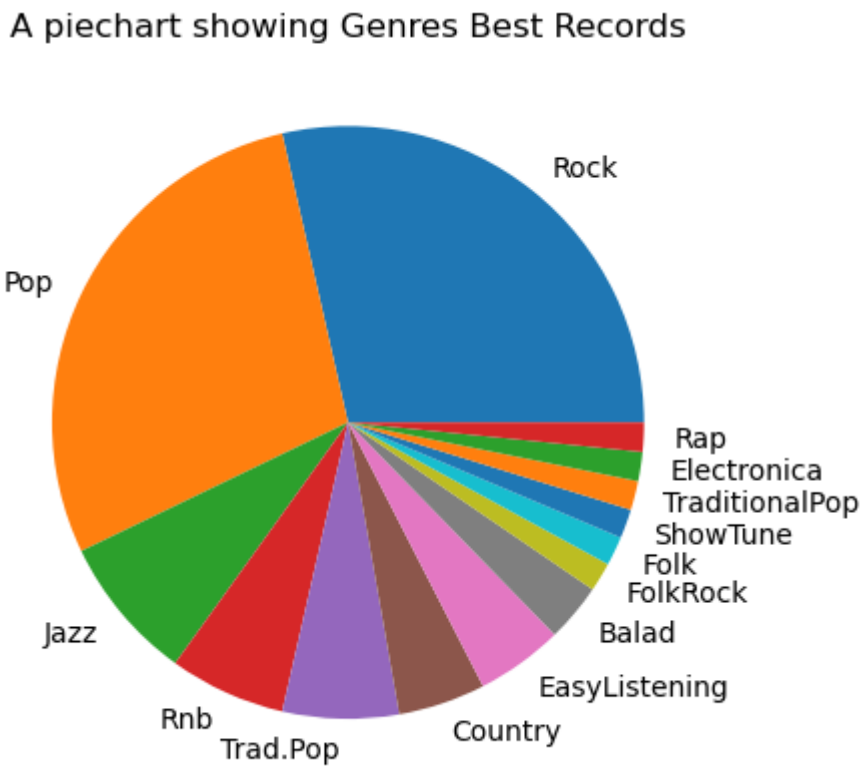
In [ ]:
```
plt.figure(figsize=(20,8))
sns.countplot(x=bestrecord['Genre'])
plt.title('Distribution of Albums by genre')
plt.ylabel('Total Number')
plt.show()
```



In [ ]:
```
x=bestrecord['Genre'].value_counts().head(15)
x
```

Out[ ]:
```
Rock                18
Pop                 18
Jazz                 5
Soul                 4
R&B                  4
Traditional Pop      3
Country              3
Easy Listening       2
Balad                1
Folk Rock            1
Folk                 1
Show Tune            1
Traditional Pop      1
Electronica          1
Rap/Hip-Hop          1
Name: Genre, dtype: int64
```

In [ ]:
```
x = [18,18,5,4,4,3,3,2,1,1,1,1,1,1]
labels = ('Rock','Pop','Jazz','Rnb','Trad.Pop','Country','EasyListening','Balad','F
plt.pie(x=x,labels=labels)
plt.title('A piechart showing Genres Best Records')
plt.show()
```



In [ ]:
```
bestrecord['Artist'].value_counts().head(7)
#These are top  5 artists
```

Out[ ]:
```
Eric Clapton          2
The 5th Dimension     2
Adele                 2
Roberta Flack         2
Simon & Garfunkel     2
Henry Mancini         2
Billie Eilish         2
Name: Artist, dtype: int64
```

In [ ]:
```
assert bestrecord['Record'].nunique() == bestrecord.shape[0]
```

GRAMMYS SELLING

In [ ]:
```
dfs[3]
```

Out[ ]:

	Artist	total	sales	streaming	publishing	touring	year
0	Taylor Swift	23.8	10	10.60	3.200	0.0	2020
1	Post Malone	23.2	0.7125	8.10	2.000	12.4	2020
2	Celine Dion	17.5	0.25	0.29	0.024	17.0	2020
3	Eagles	16.3	0.97	2.70	1.200	11.4	2020
4	Bellie Eilish	14.7	2.1	5.90	5.700	1.0	2020
...	...	...	...	...	...	...	...
115	YoungBoy Never Broke Again	10.4	0.12	8.90	1.400	0.0	2021
116	Thomas Rhett	10.3	0.17	2.40	0.410	7.4	2021
117	Zac Brown Band	10.3	0.23	1.60	1.000	7.4	2021
118	Maluma	10.2	0.002	1.30	0.810	8.1	2021
119	The Weeknd	10.1	1.3	7.30	1.600	0.0	2021

120 rows × 7 columns

In [ ]:
```
first_analysis(moneymakers)
```

In [ ]:
```
#Sales by Year
moneymakers.head()
```

Out[ ]:

	Artist	total	sales	streaming	publishing	touring	year
0	Taylor Swift	23.8	10	10.60	3.200	0.0	2020
1	Post Malone	23.2	0.7125	8.10	2.000	12.4	2020
2	Celine Dion	17.5	0.25	0.29	0.024	17.0	2020
3	Eagles	16.3	0.97	2.70	1.200	11.4	2020
4	Bellie Eilish	14.7	2.1	5.90	5.700	1.0	2020

In [ ]:
```
moneymakers.groupby('Artist')['streaming'].agg('sum').sort_values(ascending=False)
# Most Streamed artists ,Drake was the most streamed artist over 2020-2021
```

Out[ ]:
```
Artist
Drake                          49.300
Taylor Swift                   35.270
YoungBoy Never Broke Again     18.900
Post Malone                    18.500
Lil Baby                       16.700
                                ...
Shania Twain                    0.480
Kiss                            0.431
Alanis Morissette               0.330
Celine Dion                     0.290
Jennifer Lopez                  0.080
Name: streaming, Length: 90, dtype: float64
```

HOW ARTISTS HAVE EARNED OVER THE PAST FEW YEARS OF GRAMMY

In [ ]:
```
dfs[4]
```

Out[ ]:

	Year	Musician	Nationality	Earnings (Millions)	Adjusted earnings\n(in 2023 dollar)
0	1987	Bruce Springsteen	United States	$56	134
1	1988	Michael Jackson *	United States	$97	222
2	1989	Michael Jackson *	United States	$125	273
3	1990	Michael Jackson	United States	$100	207
4	1991	New Kids on the Block *	United States	$115	229
5	1992	New Kids on the Block	United States	$62	120
6	1993	Guns N' Roses	United States	$53	99
7	1994	Pink Floyd	United Kingdom	$62	113
8	1995	The Beatles	United Kingdom	$130	231
9	1996	The Beatles	United Kingdom	$130	225
10	1997	The Beatles	United Kingdom	$98	165
11	1998	The Rolling Stones	United Kingdom	$57	95
12	1999	Backstreet Boys	United States	$60	98
13	2001	The Beatles	United Kingdom	$70	107
14	2002	U2	Ireland	$69	104
15	2003	The Rolling Stones	United Kingdom	$66.50	98
16	2004	Bruce Springsteen	United States	$64	92
17	2005	Madonna	United States	$50	69
18	2006	U2	Ireland	$110	148
19	2007	The Rolling Stones	United Kingdom	$110	144
20	2008	The Police	United Kingdom	$115	145
21	2009	Madonna	United States	$110	139
22	2010	U2	Ireland	$130	162
23	2011	U2	Ireland	$195	235
24	2012	Dr. Dre	United States	$110	130
25	2013	Madonna	United States	$125	145
26	2014	Dr. Dre	United States	$620	710
27	2015	Katy Perry	United States	$135	154
28	2016	Taylor Swift	United States	$170	192

	Year	Musician	Nationality	Earnings (Millions)	Adjusted earnings\n(in 2023 dollar)
29	2017	Diddy	United States	$130	144
30	2018	U2	Ireland	$118	127
31	2019	Taylor Swift	United States	$185	196
32	2020	Kanye West	United States	$170	178
33	2021	Bruce Springsteen	United States	$435	435

In [ ]:
```
rich.head(10)
```

Out[ ]:

	Year	Musician	Nationality	Earnings (Millions)	Adjusted earnings\n(in 2023 dollar)
0	1987	Bruce Springsteen	United States	$56	134
1	1988	Michael Jackson *	United States	$97	222
2	1989	Michael Jackson *	United States	$125	273
3	1990	Michael Jackson	United States	$100	207
4	1991	New Kids on the Block *	United States	$115	229
5	1992	New Kids on the Block	United States	$62	120
6	1993	Guns N' Roses	United States	$53	99
7	1994	Pink Floyd	United Kingdom	$62	113
8	1995	The Beatles	United Kingdom	$130	231
9	1996	The Beatles	United Kingdom	$130	225

In [ ]:
```
first_analysis(rich)
```

In [ ]:
```
rich.columns
```

Out[ ]:
```
Index(['Year', 'Musician', 'Nationality', 'Earnings (Millions)',
       'Adjusted earnings\n(in 2023 dollar)'],
      dtype='object')
```

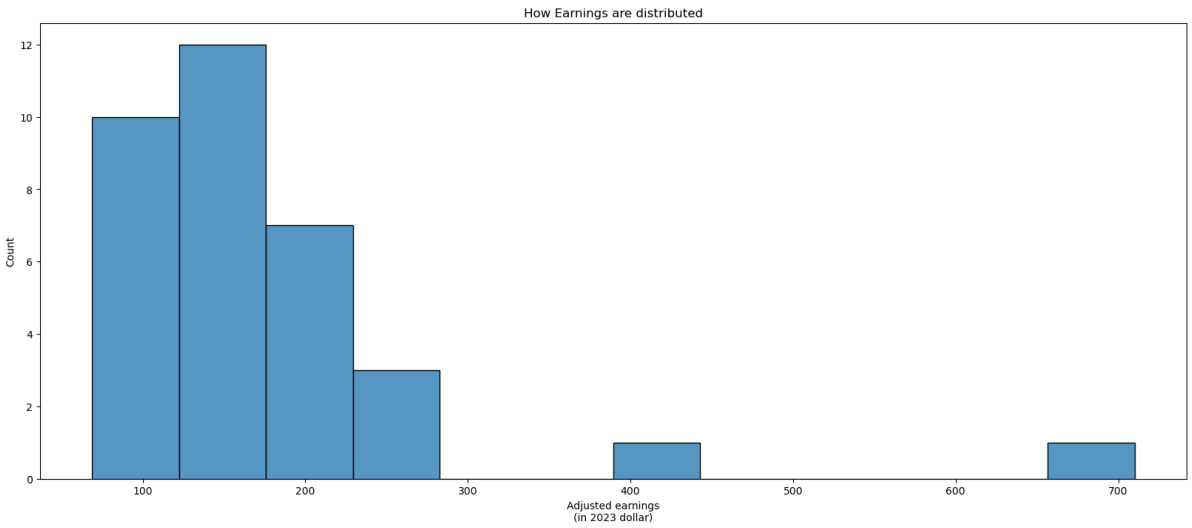
In [ ]:
```
rich.groupby('Musician')['Adjusted earnings\n(in 2023 dollar)'].agg('sum').sort_val
# Dr Dre has had the highest earnings
```

Out[ ]:
```
Musician
Dr. Dre                     840
U2                          776
The Beatles                 728
Bruce Springsteen           661
Michael Jackson *           495
Taylor Swift                388
Madonna                     353
The Rolling Stones          337
New Kids on the Block *     229
Michael Jackson             207
Kanye West                  178
Katy Perry                  154
The Police                  145
Diddy                       144
New Kids on the Block       120
Pink Floyd                  113
Guns N' Roses                99
Backstreet Boys              98
Name: Adjusted earnings\n(in 2023 dollar), dtype: int64
```

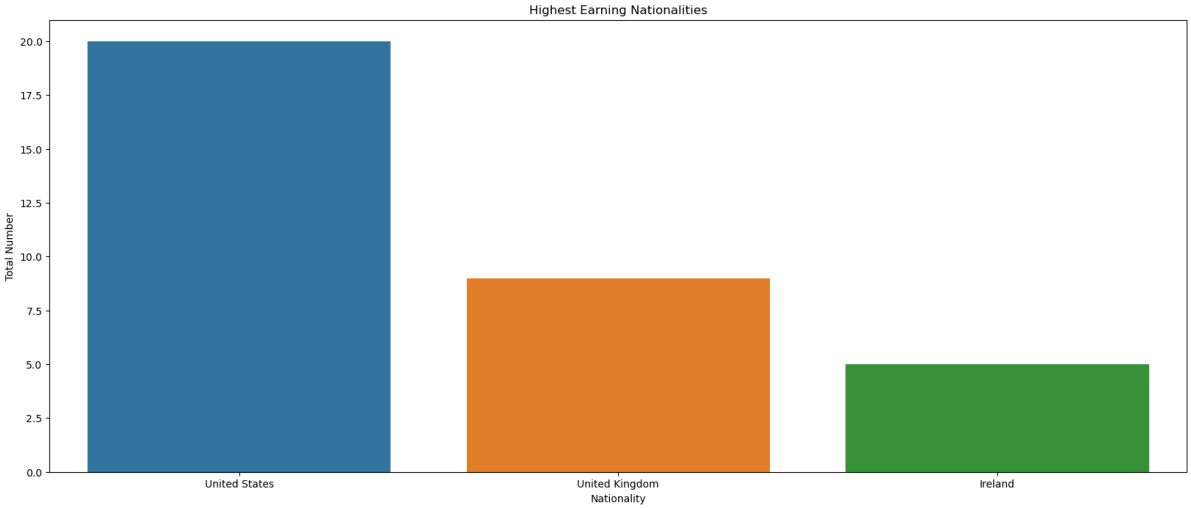
In [ ]:
```
rich.Musician.value_counts().head(10)
```

Out[ ]:
```
U2                    5
The Beatles           4
Bruce Springsteen     3
Madonna               3
The Rolling Stones    3
Taylor Swift          2
Dr. Dre               2
Michael Jackson *     2
Diddy                 1
Katy Perry            1
Name: Musician, dtype: int64
```

In [ ]:
```
plt.figure(figsize=(20,8))
sns.histplot(x= 'Adjusted earnings\n(in 2023 dollar)',data=rich)
plt.title('How Earnings are distributed')
plt.show()
```



In [ ]:
```
plt.figure(figsize=(20,8))
sns.countplot(x = 'Nationality',data=rich)
plt.title('Highest Earning Nationalities')
plt.ylabel('Total Number')
# Lots of USA artists that earn so much
plt.show()
```



Findings

- **Artists with Most Records:** Stevie Wonder has the most Grammy nominations and awards.
- **Artists by Race:** White artists dominate the Grammy nominations and awards, followed by Black artists.
- **Rolling Stone Ranks:** The Beatles, Bob Dylan, and Elvis Presley are ranked as the top three artists by Rolling Stone.
- **Best Albums of All Time:** New York has the most appearances as the artists' hometown in the best album category.
- **Best Record Categories:** Rock is the dominant genre, with Eric Clapton and The 5th Dimension among the top artists.
- **Most Streamed Artists:** Drake, Taylor Swift, and YoungBoyNBA are among the most streamed artists.
- **Artists' Earnings:** Dr. Dre, U2, and The Beatles are among the top earners in the music industry.
- **Countries' Earnings:** The USA, UK, and Ireland are among the top countries earning from the music industry.

Conclusion

The Grammy Awards reflect the diverse talent in the music industry, with artists from various races and genres being recognized. The awards not only celebrate artistic achievement but also have a significant impact on artists' careers and earnings. The music industry is a global business, with countries like the USA, UK, and Ireland playing key roles in terms of earnings and influence.

- **Future Directions**Further analysis could focus on trends in Grammy nominations and awards over time to identify patterns and changes in the music industry. Exploring the impact of Grammy Awards on artists' careers and the music industry as a whole could provide valuable insights into the industry's dynamics.
- **References** The Recording Academy. (n.d.). Grammy Awards. Retrieved from https://www.grammy.com/ Acknowledgements Special thanks to The Recording

Academy for organizing the Grammy Awards and recognizing outstanding talent in the music industry.

In [ ]:

In [ ]: