```
In [33]: import pandas as pd

         data = pd.read_csv("C:\\Users\\HP\\Downloads\\Video Games.csv",encoding= 'unicode_escape')
```

```
In [5]: data.head(10)
```

Out[5]:

	index	Rank	Game Title	Platform	Year	Genre	Publisher	North America	Europe	Japan	Rest of World	Global	Review
0	0	1	Wii Sports	Wii	2006.0	Sports	Nintendo	40.43	28.39	3.77	8.54	81.12	76.28
1	1	2	Super Mario Bros.	NES	1985.0	Platform	Nintendo	29.08	3.58	6.81	0.77	40.24	91.00
2	2	3	Mario Kart Wii	Wii	2008.0	Racing	Nintendo	14.50	12.22	3.63	3.21	33.55	82.07
3	3	4	Wii Sports Resort	Wii	2009.0	Sports	Nintendo	14.82	10.51	3.18	3.01	31.52	82.65
4	4	5	Tetris	GB	1989.0	Puzzle	Nintendo	23.20	2.26	4.22	0.58	30.26	88.00
5	5	6	New Super Mario Bros.	DS	2006.0	Platform	Nintendo	10.85	8.87	6.48	2.88	29.08	90.00
6	6	7	Wii Play	Wii	2006.0	Misc	Nintendo	13.83	9.11	2.93	2.84	28.71	61.64
7	7	8	Duck Hunt	NES	1984.0	Shooter	Nintendo	26.93	0.63	0.28	0.47	28.31	84.00
8	8	9	New Super Mario Bros. Wii	Wii	2009.0	Platform	Nintendo	13.35	6.48	4.66	2.25	26.75	88.18
9	9	10	Nintendogs	DS	2005.0	Simulation	Nintendo	9.02	10.81	1.93	2.73	24.50	85.00

```
In [8]: data.shape
```

Out[8]: (1907, 13)

```
In [9]: data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1907 entries, 0 to 1906
Data columns (total 13 columns):
 #   Column         Non-Null Count  Dtype
---  ------         --------------  -----
 0   index          1907 non-null   int64
 1   Rank           1907 non-null   int64
 2   Game Title     1907 non-null   object
 3   Platform       1907 non-null   object
 4   Year           1878 non-null   float64
 5   Genre          1907 non-null   object
 6   Publisher      1905 non-null   object
 7   North America  1907 non-null   float64
 8   Europe         1907 non-null   float64
 9   Japan          1907 non-null   float64
 10  Rest of World  1907 non-null   float64
 11  Global         1907 non-null   float64
 12  Review         1907 non-null   float64
dtypes: float64(7), int64(2), object(4)
memory usage: 193.8+ KB
```

In [34]: `data.isnull().sum()`

Out[34]:
```
index            0
Rank             0
GameTitle        0
Platform         0
Year            29
Genre            0
Publisher        2
North America    0
Europe           0
Japan            0
Rest of World    0
Global           0
Review           0
dtype: int64
```

In [41]: `Sales = data.groupby('Year').count().sort_values('GameTitle',ascending=False).reset_index()[['Year','Global']]`
`Sales`

Out[41]:

	Year	Global
0	2008.0	184
1	2007.0	157
2	2009.0	131
3	2010.0	130
4	2004.0	122
5	2003.0	114
6	2002.0	110
7	2005.0	105
8	2006.0	103
9	2011.0	100
10	2001.0	91
11	1998.0	81
12	2000.0	67
13	1999.0	66
14	2012.0	60
15	1997.0	54
16	1996.0	47
17	1995.0	22
18	1994.0	21
19	1992.0	20
20	1990.0	13
21	1993.0	12
22	1986.0	12
23	1991.0	10

	Year	Global
24	1984.0	9
25	1989.0	9
26	1988.0	9
27	1987.0	7
28	1985.0	6
29	1983.0	6

In [21]:
```python
import matplotlib.pyplot as plt
plt.figure(figsize=(15, 10))
sns.countplot(x="Genre", data=data, order = data['Genre'].value_counts().index)
plt.xticks(rotation=90)
```

Out[21]:
```
(array([ 0,  1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11]),
 [Text(0, 0, 'Sports'),
  Text(1, 0, 'Action'),
  Text(2, 0, 'Shooter'),
  Text(3, 0, 'Platform'),
  Text(4, 0, 'Racing'),
  Text(5, 0, 'Role-Playing'),
  Text(6, 0, 'Misc'),
  Text(7, 0, 'Fighting'),
  Text(8, 0, 'Adventure'),
  Text(9, 0, 'Simulation'),
  Text(10, 0, 'Puzzle'),
  Text(11, 0, 'Strategy')])
```
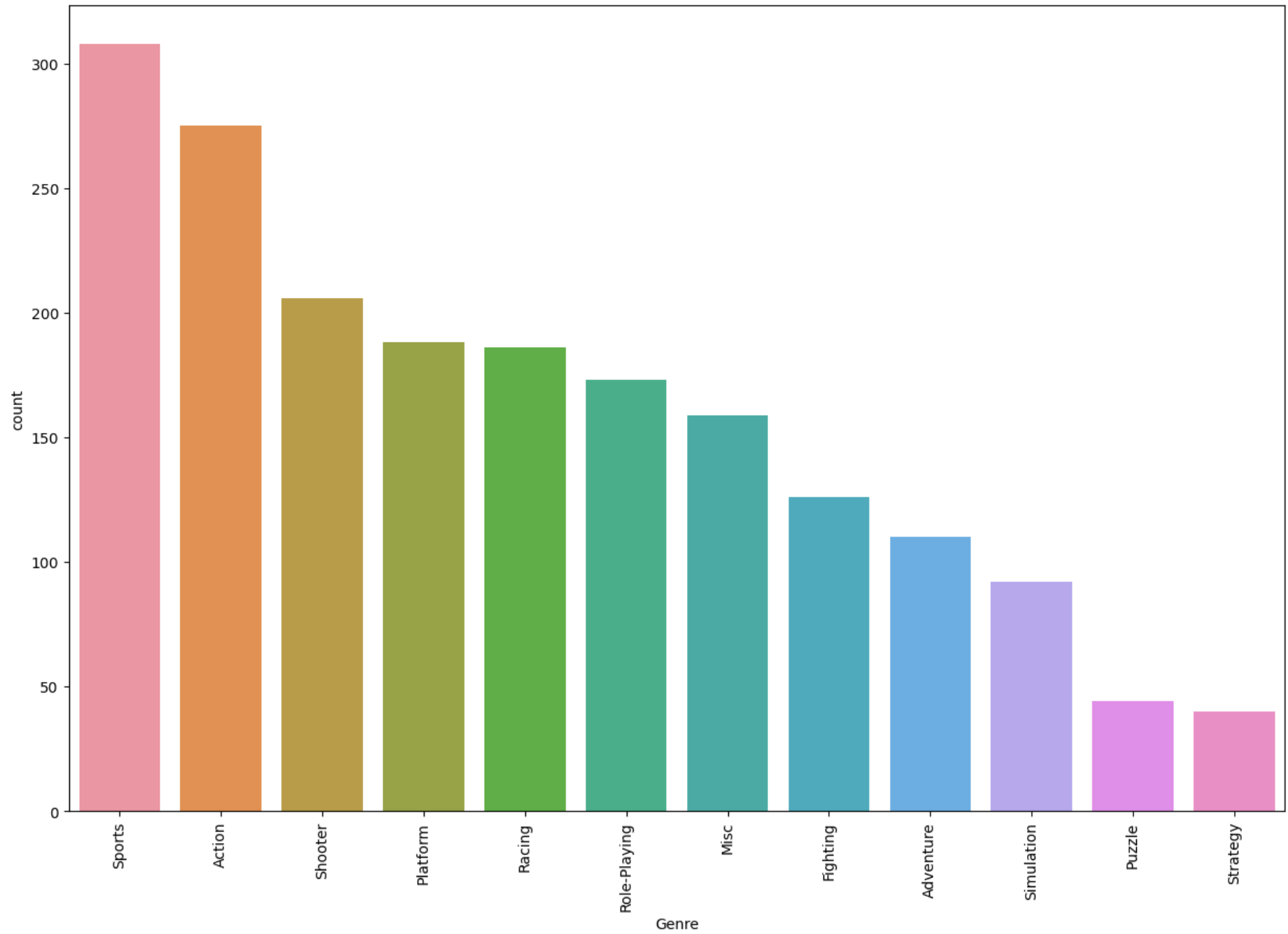
In [26]:
```python
sale_pbl = data[['Publisher', 'Global']]
sale_pbl = sale_pbl.groupby('Publisher')['Global'].sum().sort_values(ascending=False).head(20)
sale_pbl = pd.DataFrame(sale_pbl).reset_index()
```

In [27]:
```python
sale_pbl
```

Out[27]:

	Publisher	Global
0	Nintendo	1448.84
1	Electronic Arts	633.36
2	Sony Computer Entertainment	377.61
3	Activision	371.42
4	Take-Two Interactive	208.42
5	Ubisoft	196.32
6	Microsoft Game Studios	169.73
7	THQ	142.98
8	Sega	122.67
9	Capcom	114.33
10	Konami Digital Entertainment	107.67
11	Namco Bandai Games	71.69
12	Square Enix	64.59
13	LucasArts	61.11
14	Eidos Interactive	56.25
15	Atari	47.15
16	Square	38.50
17	Bethesda Softworks	37.16
18	Disney Interactive Studios	37.04
19	Warner Bros. Interactive Entertainment	34.41

In [35]:
```python
game = data.GameTitle.value_counts().head(20)
game
```

```
Out[35]:    LEGO Batman: The Videogame                    6
            FIFA Soccer 08                                6
            LEGO Indiana Jones: The Original Adventures   6
            WWE SmackDown vs Raw 2008                     5
            Pro Evolution Soccer 2008                     5
            Star Wars: The Force Unleashed                5
            The Simpsons Game                             5
            FIFA Soccer 10                                5
            Guitar Hero III: Legends of Rock              4
            LEGO Star Wars II: The Original Trilogy       4
            Call of Duty 4: Modern Warfare                4
            FIFA Soccer 09                                4
            Call of Duty: Black Ops                       4
            Madden NFL 07                                 4
            Spider-Man: The Movie                         4
            Madden NFL 08                                 4
            FIFA Soccer 11                                4
            LEGO Star Wars: The Video Game                4
            Guitar Hero 5                                 4
            Spider-Man 2                                  4
            Name: GameTitle, dtype: int64
```

```python
In [39]:   game = data[['GameTitle', 'Global']]
           game = game.groupby('GameTitle')['Global'].sum().sort_values(ascending=False).head(20)
           game = pd.DataFrame(game).reset_index()
           game
```

Out[39]:

	GameTitle	Global
0	Wii Sports	81.12
1	Super Mario Bros.	40.24
2	Tetris	35.84
3	Mario Kart Wii	33.55
4	Wii Sports Resort	31.52
5	New Super Mario Bros.	29.08
6	Wii Play	28.71
7	Call of Duty: Black Ops	28.47
8	Duck Hunt	28.31
9	Call of Duty: Modern Warfare 3	27.52
10	New Super Mario Bros. Wii	26.75
11	Nintendogs	24.50
12	Grand Theft Auto: San Andreas	23.60
13	Call of Duty: Modern Warfare 2	23.12
14	Pokémon Gold / Silver Version	23.10
15	Wii Fit	22.74
16	Call of Duty: Black Ops II	22.59
17	Mario Kart DS	22.47
18	Wii Fit Plus	21.15
19	Super Mario World	20.61