In [8]:
```
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
```

In [2]:
```
df=pd.read_csv('Books_Data_Clean.csv')
```

In [3]:
```
df.head()
```

Out[3]:

	index	Publishing Year	Book Name	Author	language_code	Author_Rating	Book_average_
0	0	1975.0	Beowulf	Unknown, Seamus Heaney	en-US	Novice	
1	1	1987.0	Batman: Year One	Frank Miller, David Mazzucchelli, Richmond Lew...	eng	Intermediate	
2	2	2015.0	Go Set a Watchman	Harper Lee	eng	Novice	
3	3	2008.0	When You Are Engulfed in Flames	David Sedaris	en-US	Intermediate	
4	4	2011.0	Daughter of Smoke & Bone	Laini Taylor	eng	Intermediate	

In [4]:
```
df.describe()
```

Out[4]:

	index	Publishing Year	Book_average_rating	Book_ratings_count	gross sales	
count	1070.000000	1069.000000	1070.000000	1070.000000	1070.000000	1
mean	534.500000	1971.377923	4.007000	94909.913084	1856.622944	
std	309.026698	185.080257	0.247244	31513.242518	3936.924240	2
min	0.000000	-560.000000	2.970000	27308.000000	104.940000	
25%	267.250000	1985.000000	3.850000	70398.000000	372.465000	
50%	534.500000	2003.000000	4.015000	89309.000000	809.745000	
75%	801.750000	2010.000000	4.170000	113906.500000	1487.957500	
max	1069.000000	2016.000000	4.770000	206792.000000	47795.000000	28

In [5]:
```
df = df[df["Publishing Year"] > 1900]
```

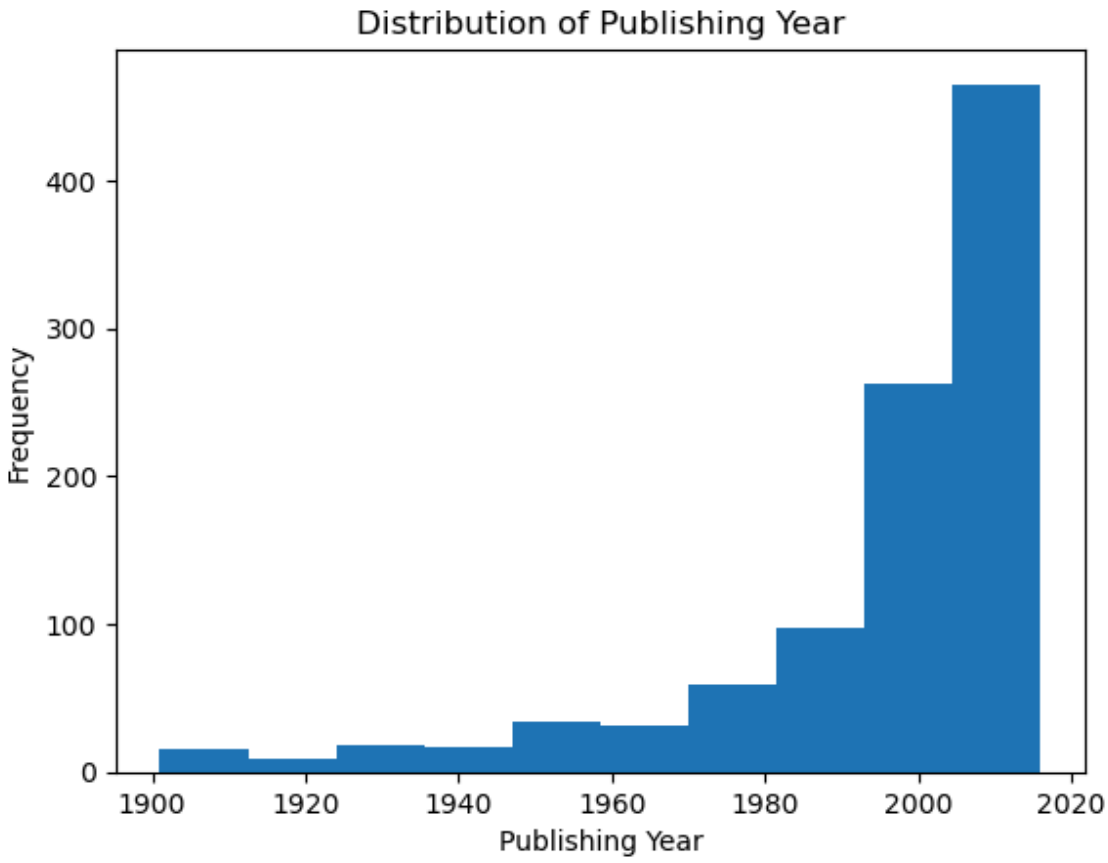
In [6]:
```
df.isna().sum()
```

Out[6]:
```
index                  0
Publishing Year        0
Book Name             21
Author                 0
language_code         49
Author_Rating          0
Book_average_rating    0
Book_ratings_count     0
genre                  0
gross sales            0
publisher revenue      0
sale price             0
sales rank             0
Publisher              0
units sold             0
dtype: int64
```

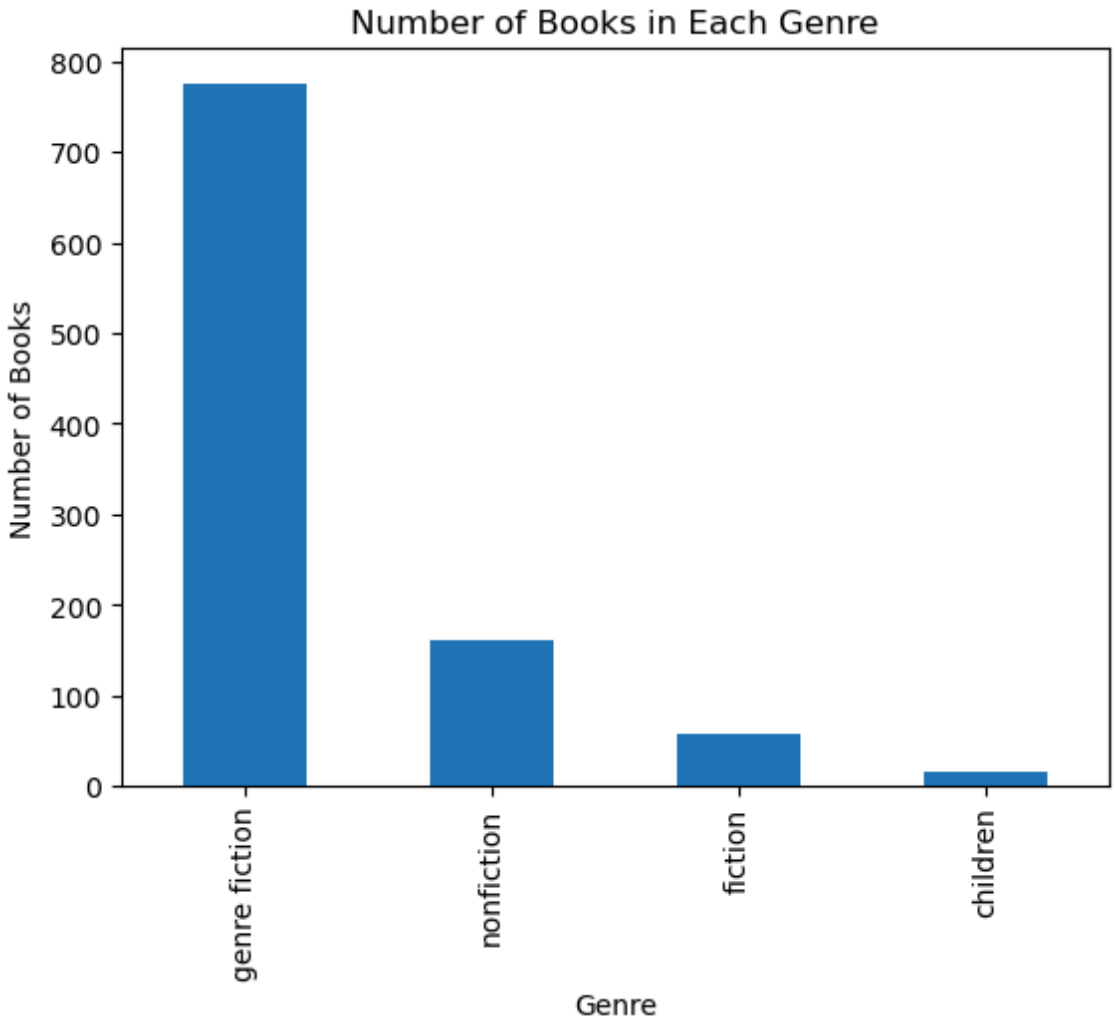
In [7]:
```
df.duplicated().sum()
```

Out[7]:
```
0
```

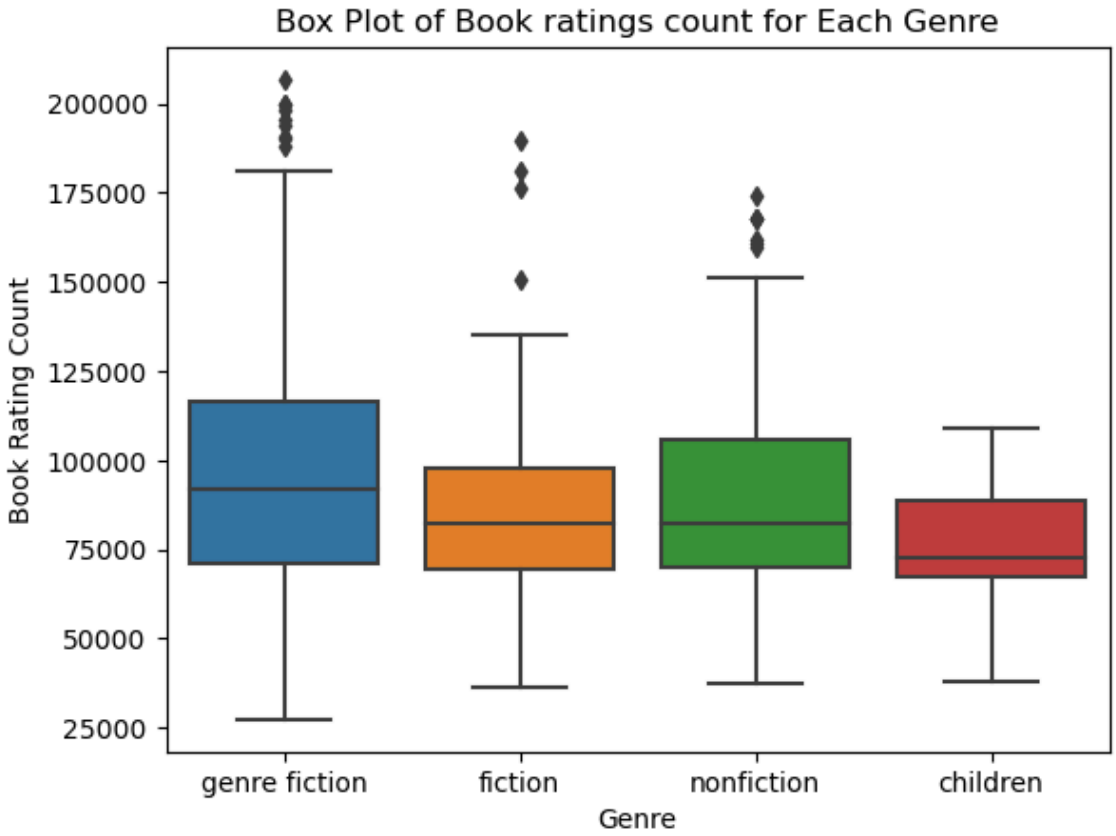
In [9]:
```
plt.hist(df["Publishing Year"])
plt.xlabel("Publishing Year")
plt.ylabel("Frequency")
plt.title("Distribution of Publishing Year")
plt.show()
```



In [11]:
```
df["genre"].value_counts().plot(kind = "bar")
plt.xlabel("Genre")
plt.ylabel("Number of Books")
plt.title("Number of Books in Each Genre")
plt.show()
```



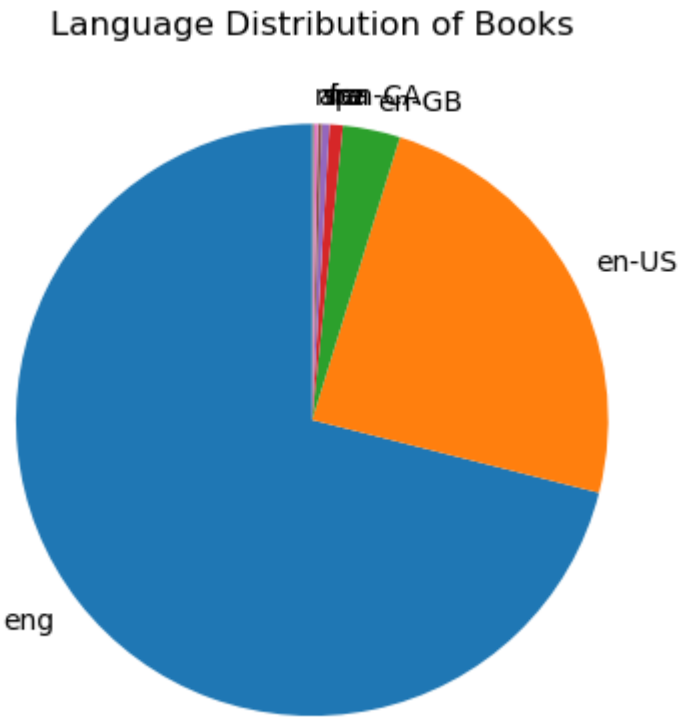
In [12]:
```
sns.boxplot(x = "genre", y = "Book_ratings_count", data = df)
plt.xlabel("Genre")
plt.ylabel("Book Rating Count")
plt.title("Box Plot of Book ratings count for Each Genre")
plt.show()
```



In [14]:
```
plt.scatter(df["sale price"], df["units sold"])
plt.xlabel("Sale price")
plt.ylabel("Unit solds")
plt.title("Scatter plot of sale price vs unit sold")
plt.show()
```

In [17]:
```
language_counts = df["language_code"].value_counts()
```

In [18]:
```
plt.pie(language_counts, labels = language_counts.index, startangle = 90)
plt.title("Language Distribution of Books")
plt.show()
```



In [20]:
```
df.groupby("Publisher ")["publisher revenue"].sum().sort_values(ascending =
```

Out[20]:
```
Publisher
Penguin Group (USA) LLC                 202987.308
Random House LLC                        185744.244
Amazon Digital Services,  Inc.          144415.350
HarperCollins Publishers                124264.770
Hachette Book Group                     108446.700
Simon and Schuster Digital Sales Inc     46858.206
Macmillan                                31249.830
HarperCollins Publishing                  2830.806
HarperCollins Christian Publishing        2135.670
Name: publisher revenue, dtype: float64
```

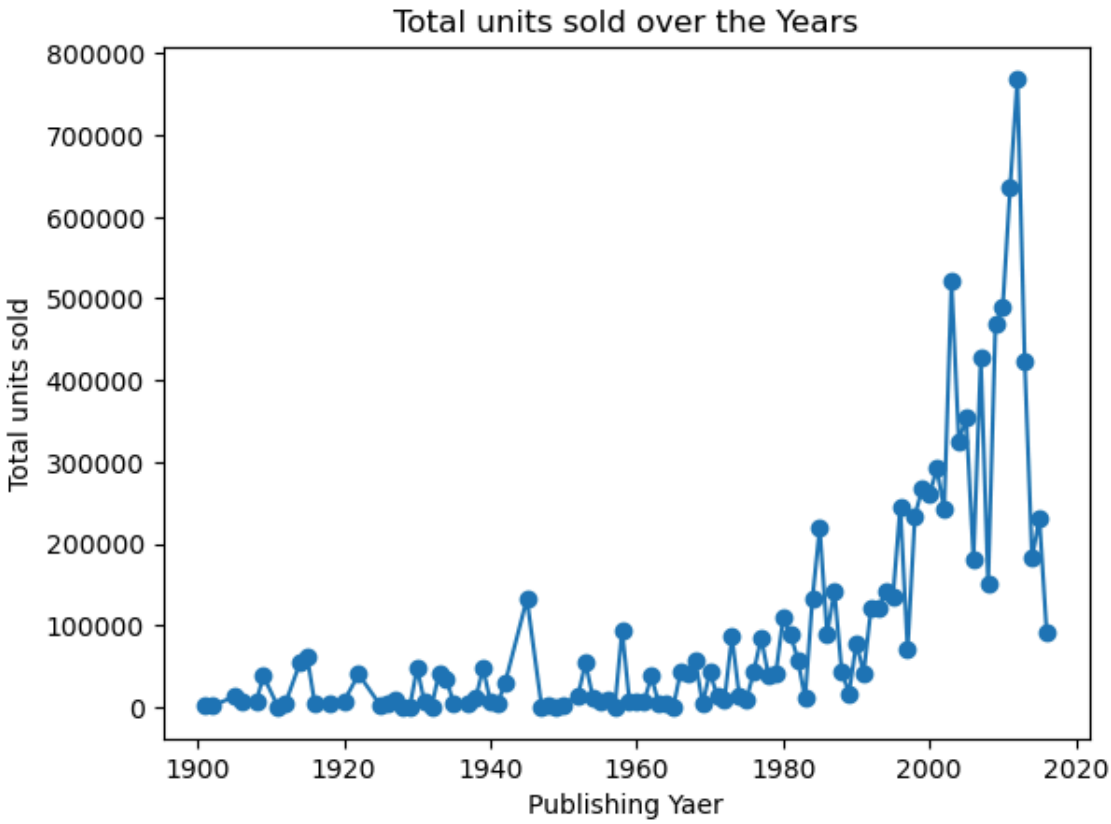
In [21]:
```
df.groupby("Author_Rating")["Book_ratings_count"].mean().sort_values(ascenc
```

Out[21]:
```
Author_Rating
Intermediate    101710.152921
Famous           97306.470588
Novice           87318.464286
Excellent        83529.591954
Name: Book_ratings_count, dtype: float64
```

In [22]:
```
df.groupby("language_code").size().sort_values(ascending = False)
```

Out[22]:
```
language_code
eng      682
en-US    232
en-GB     30
en-CA      7
fre        4
ara        2
spa        2
nl         1
dtype: int64
```

In [24]:
```
df.groupby("Publishing Year")["units sold"].sum().plot(kind = "line", marke
plt.xlabel("Publishing Yaer")
plt.ylabel("Total units sold")
plt.title("Total units sold over the Years")
plt.show()
```



In [ ]:
```

```

In [ ]:
```

```