

```
import pandas as pd
import numpy as np
import plotly.express as px

amazon = pd.read_csv(r"C:\Users\Master\Desktop\Jupyter\bestsellers with categories.csv')
amazon.describe()
```

Out [2]:

	User Rating	Reviews	Price	Year
count	550.000000	550.000000	550.000000	550.000000
mean	4.618364	11963.281818	13.100000	2014.000000
std	0.226980	11781.132017	10.842262	3.165156
min	3.300000	37.000000	0.000000	2009.000000
25%	4.500000	4058.000000	7.000000	2011.000000
50%	4.700000	8580.000000	11.000000	2014.000000
75%	4.800000	17253.250000	16.000000	2017.000000
max	4.900000	87841.000000	105.000000	2019.000000

In [9]:

amazon

Out [9]:

	Name	Author	User Rating	Reviews	Price	Year	Genre
0	10-Day Green Smoothie Cleanse	JJ Smith	4.7	17350	8	2016	Non Fiction
1	11/22/63: A Novel	Stephen King	4.6	2052	22	2011	Fiction
2	12 Rules for Life: An Antidote to Chaos	Jordan B. Peterson	4.7	18979	15	2018	Non Fiction
3	1984 (Signet Classics)	George Orwell	4.7	21424	6	2017	Fiction
4	5,000 Awesome Facts (About Everything) (Natio...	National Geographic Kids	4.8	7655	12	2019	Non Fiction
...	...	...	...	...	...	...	...
545	Wrecking Ball (Diary of a Wimpy Kid Book 14)	Jeff Kinney	4.9	9413	8	2019	Fiction
546	You Are a Badass: How to Stop Doubting Your Gr...	Jen Sincero	4.7	14331	8	2016	Non Fiction
547	You Are a Badass: How to Stop Doubting Your Gr...	Jen Sincero	4.7	14331	8	2017	Non Fiction
548	You Are a Badass: How to Stop Doubting Your Gr...	Jen Sincero	4.7	14331	8	2018	Non Fiction
549	You Are a Badass: How to Stop Doubting Your Gr...	Jen Sincero	4.7	14331	8	2019	Non Fiction

550 rows x 7 columns

In [3]:

amazon1 = amazon.rename(columns={'Name':'Book Name','Author':'Author Name'})
amazon1

Out [3]:

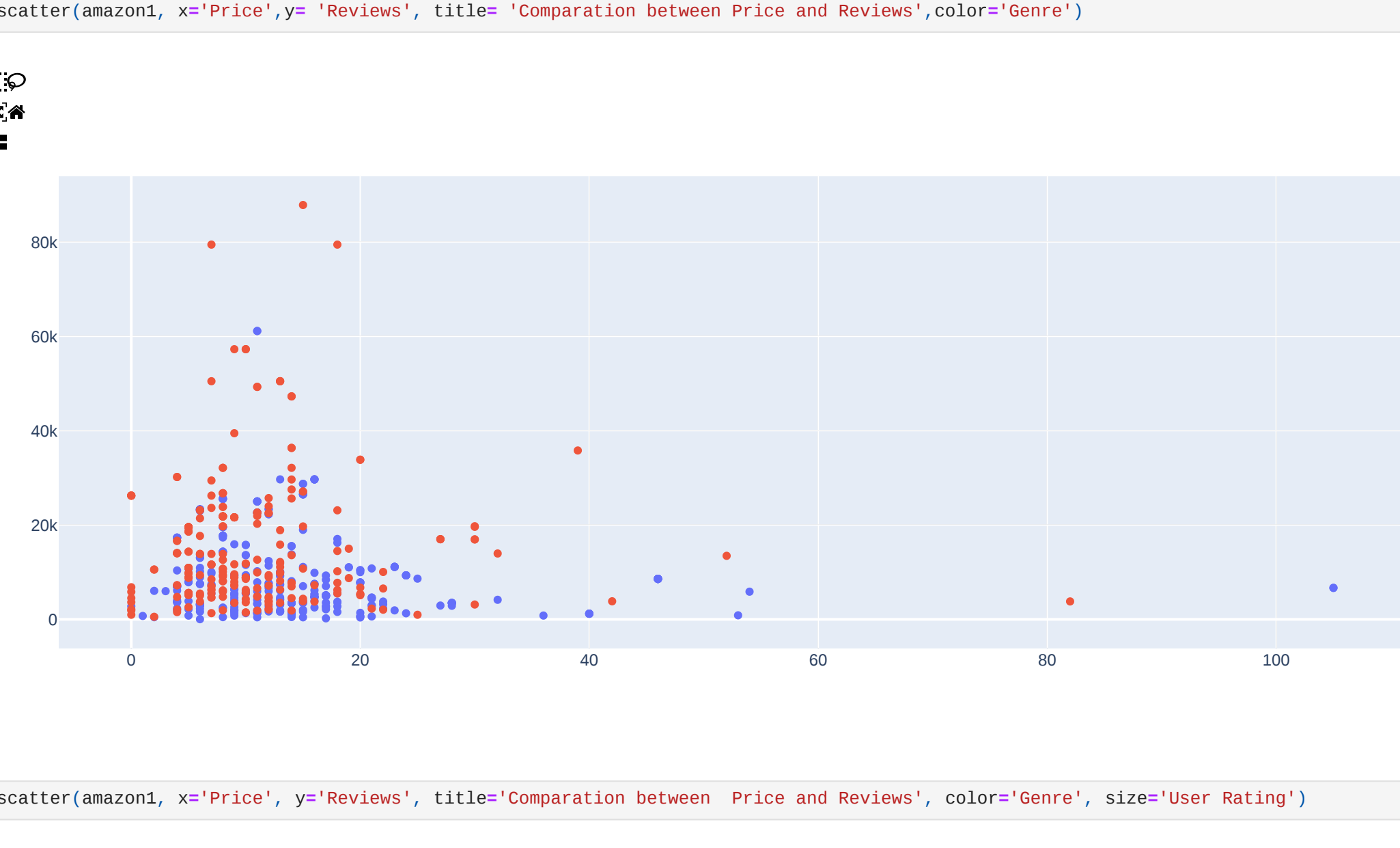
	Book Name	Author Name	User Rating	Reviews	Price	Year	Genre
0	10-Day Green Smoothie Cleanse	JJ Smith	4.7	17350	8	2016	Non Fiction
1	11/22/63: A Novel	Stephen King	4.6	2052	22	2011	Fiction
2	12 Rules for Life: An Antidote to Chaos	Jordan B. Peterson	4.7	18979	15	2018	Non Fiction
3	1984 (Signet Classics)	George Orwell	4.7	21424	6	2017	Fiction
4	5,000 Awesome Facts (About Everything) (Natio...	National Geographic Kids	4.8	7655	12	2019	Non Fiction
...	...	...	...	...	...	...	...
545	Wrecking Ball (Diary of a Wimpy Kid Book 14)	Jeff Kinney	4.9	9413	8	2019	Fiction
546	You Are a Badass: How to Stop Doubting Your Gr...	Jen Sincero	4.7	14331	8	2016	Non Fiction
547	You Are a Badass: How to Stop Doubting Your Gr...	Jen Sincero	4.7	14331	8	2017	Non Fiction
548	You Are a Badass: How to Stop Doubting Your Gr...	Jen Sincero	4.7	14331	8	2018	Non Fiction
549	You Are a Badass: How to Stop Doubting Your Gr...	Jen Sincero	4.7	14331	8	2019	Non Fiction

550 rows x 7 columns

In [4]:

grafico = px.scatter(amazon1, dimensions=['Price','User Rating','Reviews','Genre'], color='Genre')
grafico.show()

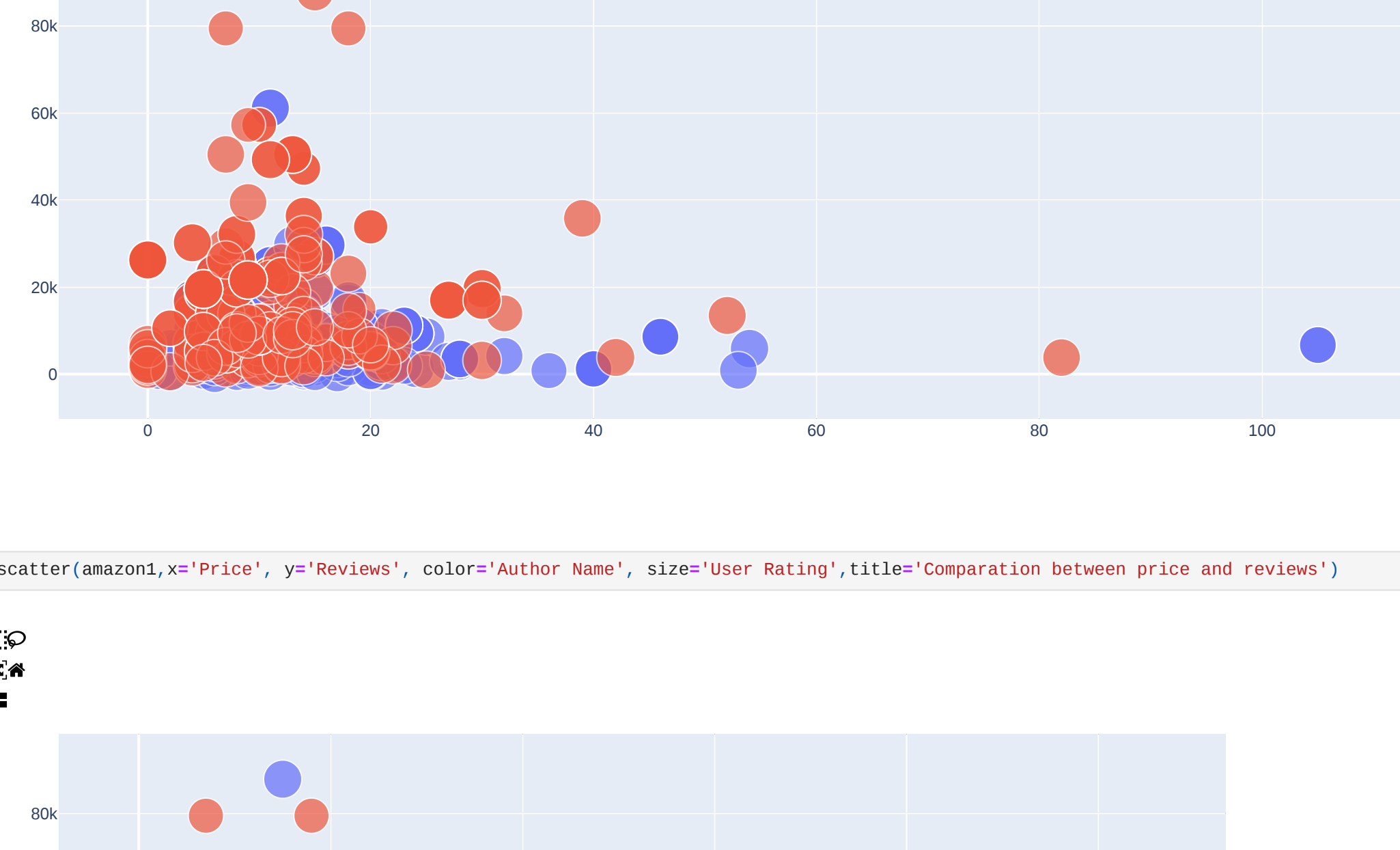
Out [4]:



In [5]:

px.scatter(amazon1, x='Price', y='Reviews', title='Comparison between Price and Reviews', color='Genre')


Out [5]:



In [6]:

px.scatter(amazon1, x='Price', y='Reviews', title='Comparison between Price and Reviews', color='Genre', size='User Rating')

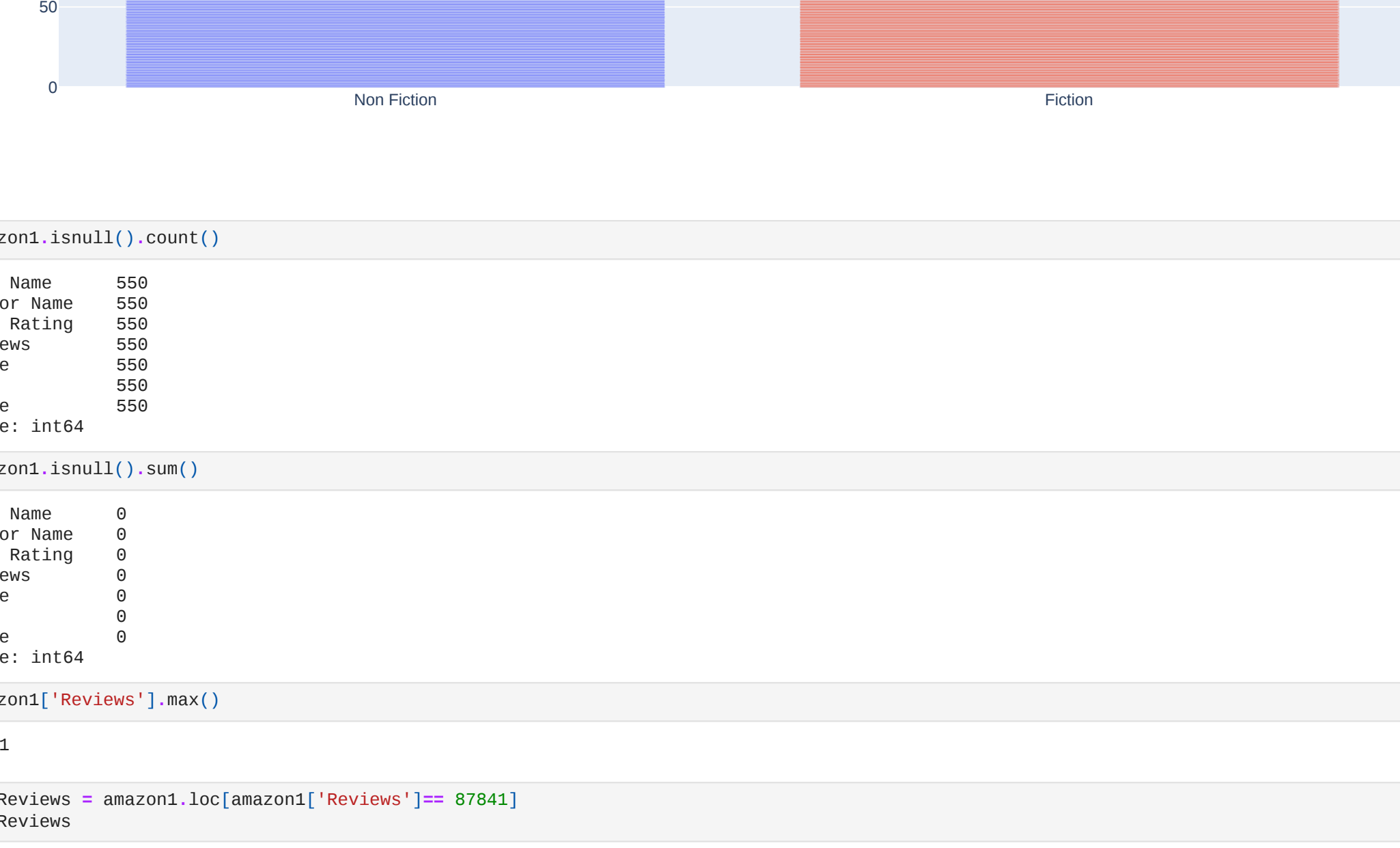
Out [6]:



In [7]:

px.scatter(amazon1, x='Price', y='Reviews', color='Author Name', size='User Rating', title='Comparison between price and reviews')

Out [7]:



In [25]:

np.unique(amazon1['Genre'], return\_counts = True)

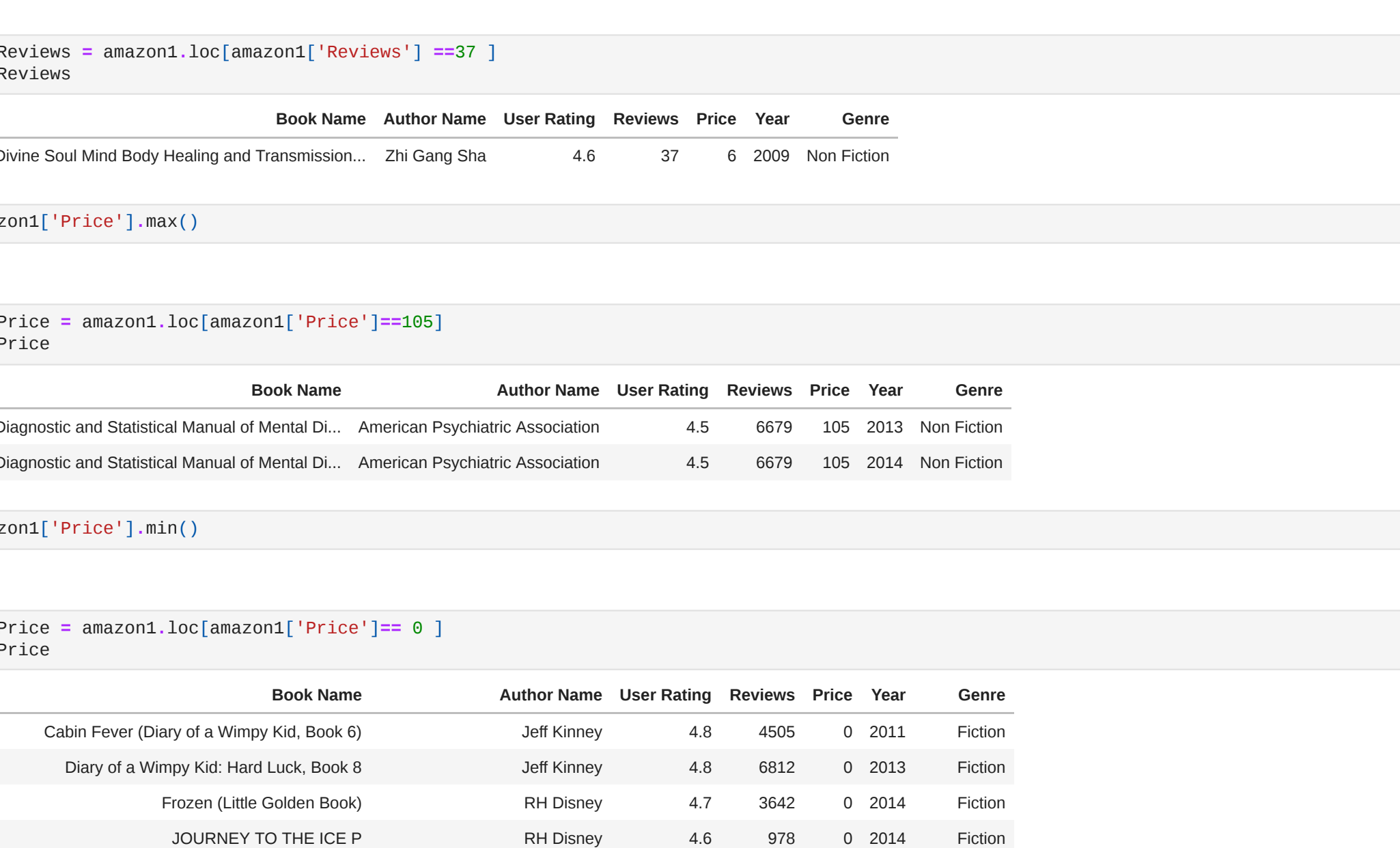
Out [25]:

array(['Fiction', 'Non Fiction'], dtype=object),
array([248, 310], dtype=int64)

In [8]:

Genre = px.bar(amazon1, x='Genre', color = 'Genre')
Genre.update\_layout(title = 'Comparison between genre movie')

Out [8]:



In [48]:

amazon1.isnull().count()

Out [48]:

	Book Name	Author Name	User Rating	Reviews	Price	Year	Genre
Book Name	550						
Author Name	550						
User Rating	550						
Reviews	550						
Price	550						
Year	550						
Genre	550						
dtype:	int64						

In [50]:

amazon1.isnull().sum()

Out [50]:

	Book Name	Author Name	User Rating	Reviews	Price	Year	Genre
Book Name	0						
Author Name	0						
User Rating	0						
Reviews	0						
Price	0						
Year	0						
Genre	0						
dtype:	int64						

In [55]:

amazon1['Reviews'].max()

Out [55]:

87841

In [58]:

MaxReviews = amazon1.loc[amazon1['Reviews']==87841]
MaxReviews

Out [58]:

	Book Name	Author Name	User Rating	Reviews	Price	Year	Genre
534	Where the Crawdads Sing	Delia Owens	4.8	87841	15	2019	Fiction

In [57]:

amazon1['Reviews'].min()

Out [57]:

37

In [59]:

MinReviews = amazon1.loc[amazon1['Reviews']==37 ]
MinReviews

Out [59]:

	Book Name	Author Name	User Rating	Reviews	Price	Year	Genre
78	Divine Soul Mind Body Healing and Transmission...	Zhi Gang Sha	4.6	37	6	2009	Non Fiction

In [65]:

amazon1['Price'].max()

Out [65]:

105

In [68]:

MaxPrice = amazon1.loc[amazon1['Price']==105]
MaxPrice

Out [68]:

	Book Name	Author Name	User Rating	Reviews	Price	Year	Genre
69	Diagnostic and Statistical Manual of Mental Di...	American Psychiatric Association	4.5	6679	105	2013	Non Fiction
70	Diagnostic and Statistical Manual of Mental Di...	American Psychiatric Association	4.5	6679	105	2014	Non Fiction

In [10]:

amazon1['Price'].min()

Out [10]:

0

In [11]:

MinPrice = amazon1.loc[amazon1['Price']==0 ]
MinPrice


Out [11]:

	Book Name	Author Name	User Rating	Reviews	Price	Year	Genre
42	Cabin Fever (Diary of a Wimpy Kid Book 6)	Jeff Kinney	4.8	4505	0	2011	Fiction
71	Diary of a Wimpy Kid: Hard Luck, Book 8	Jeff Kinney	4.8	6812	0	2013	Fiction
116	Frozen (Little Golden Book)	RH Disney	4.7	3642	0	2014	Fiction
183	JOURNEY TO THE ICE P	RH Disney	4.6	978	0	2014	Fiction
219	Little Blue Truck	Alice Schertle	4.9	1884	0	2014	Fiction
358	The Constitution of the United States	Delegates of the Constitutional	4.8	2774	0	2016	Non Fiction
381	The Getaway	Jeff Kinney	4.8	5836	0	2017	Fiction
461	The Short Second Life of Bree Tanner: An Eclip...	Stephanie Meyer	4.6	2122	0	2010	Fiction
505	To Kill a Mockingbird	Harper Lee	4.8	26234	0	2013	Fiction
506	To Kill a Mockingbird	Harper Lee	4.8	26234	0	2014	Fiction
507	To Kill a Mockingbird	Harper Lee	4.8	26234	0	2015	Fiction
508	To Kill a Mockingbird	Harper Lee	4.8	26234	0	2016	Fiction

In [12]:

px.scatter(MinPrice, x='Price', y='Reviews', color='Genre', title='Comparison between free books and reviews')

Out [12]:



In [13]:

# Books for free with the greater number of Reviews.
MinPrice.loc[MinPrice['Reviews'].max()]

Out [13]:

	Book Name	Author Name	User Rating	Reviews	Price	Year	Genre
505	To Kill a Mockingbird	Harper Lee	4.8	26234	0	2013	Fiction
506	To Kill a Mockingbird	Harper Lee	4.8	26234	0	2014	Fiction
507	To Kill a Mockingbird	Harper Lee	4.8	26234	0	2015	Fiction
508	To Kill a Mockingbird	Harper Lee	4.8	26234	0	2016	Fiction

In [14]:

AuthorName = amazon1['Author Name'].value\_counts()
AuthorName

Out [14]:

	Author Name	Count
Jeff Kinney	12	
Suzanne Collins	11	
Rick Riordan	11	
Gary Chapman	11	
American Psychological Association	10	
Pierre Dukan	1	
George W. Bush	1	
Amy Shields	1	
Nike Moreno	1	
Ian K. Smith M.D.	1	

Name: Author Name, Length: 248, dtype: int64

In [15]:

NumberOfAuthor = AuthorName.count()
NumberOfAuthor

Out [15]:

248

In [16]:

amazon1['Year'].value\_counts()

Out [16]:

	Year	Count
2019	50	
2018	50	
2017	50	
2016	50	
2015	50	
2014	50	
2013	50	
2012	50	
2011	50	
2010	50	
2009	50	

Name: Year, dtype: int64

In [17]:

MaxRating = amazon1.loc[amazon1['User Rating'].max()]
MaxRating
MaxRating

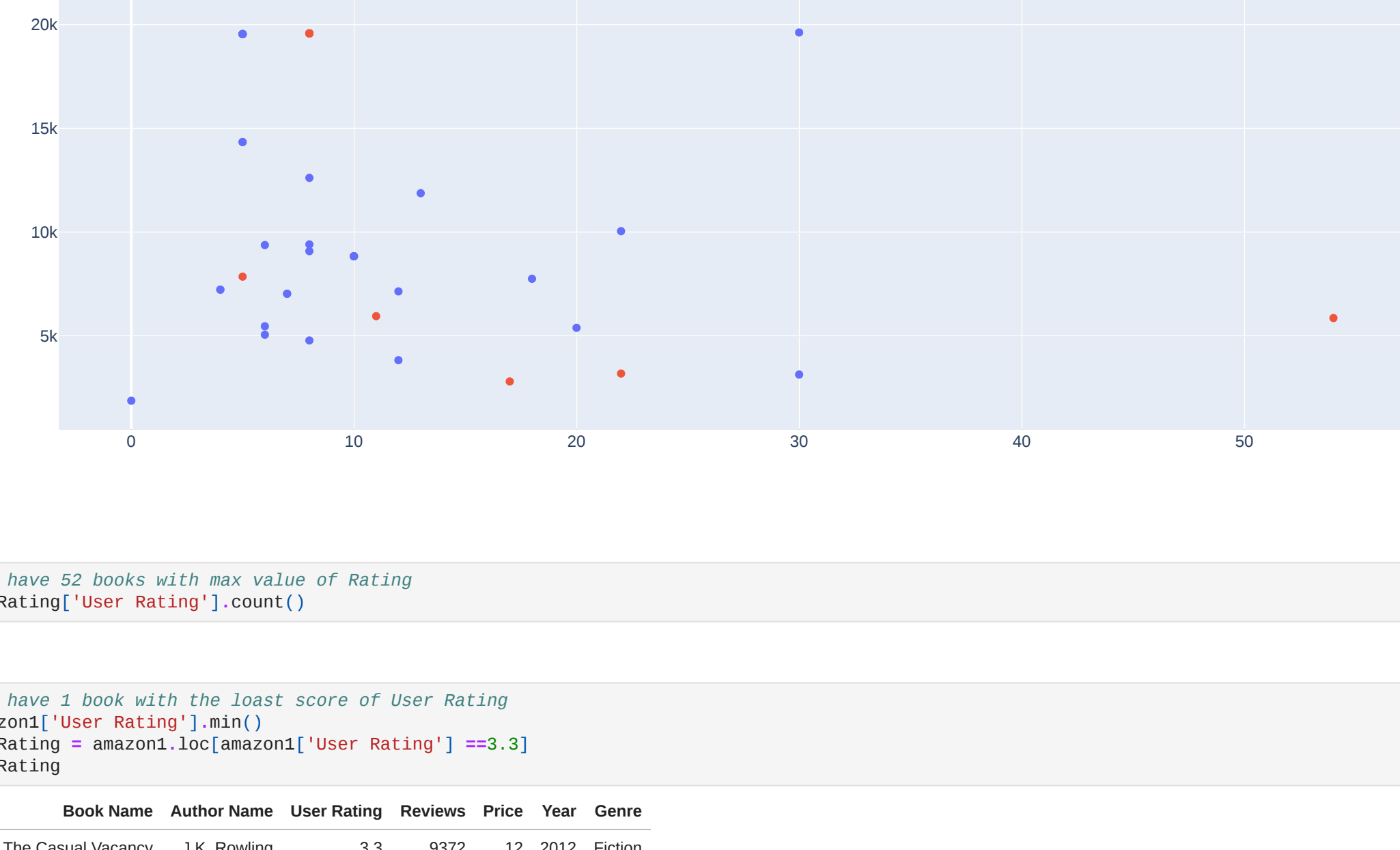
Out [17]:

	Book Name	Author Name	User Rating	Reviews	Price	Year	Genre
40	Brown Bear, Brown Bear, What Do You See?	Bill Martin Jr.	4.9	14244	5	2017	Fiction
41	Brown Bear, Brown Bear, What Do You See?	Bill Martin Jr.	4.9	14244	5	2018	Fiction
81	Dog Man and Cat Kid: From the Creator of Capta...	Dav Pilkey	4.9	5962	6	2018	Fiction
82	Dog Man: A Tale of Two Kitties: From the Creat...	Dav Pilkey	4.9	4786	8	2017	Fiction
83	Dog Man: Brawl of the Wild: From the Creator o...	Dav Pilkey	4.9	7235	4	2018	Fiction
84	Dog Man: Brawl of the Wild: From the Creator of...	Dav Pilkey	4.9	12619	8	2019	Fiction
85	Dog Man: Fetch-22: From the Creator of Captain...	Dav Pilkey	4.9	9089	8	2018	Fiction
86	Dog Man: For Whom the Ball Rolls: From the Cre...	Dav Pilkey	4.9	5470	6	2018	Fiction
87	Dog Man: Lord of the Fleas: From the Creator o...	Dav Pilkey	4.9	5470	8	2018	Fiction
146	Goodnight, Goodnight Construction Site (Hardco...	Sherri Duskey Rinker	4.9	7038	7	2012	Fiction
147	Goodnight, Goodnight Construction Site (Hardco...	Sherri Duskey Rinker	4.9	7038	7	2013	Fiction
151	Hamilton: The Revolution	Lin-Manuel Miranda	4.9	5867	54	2016	Non Fiction
153	Harry Potter and the Chamber of Secrets: The I...	J.K. Rowling	4.9	19622	30	2016	Fiction
155	Harry Potter and the Goblet of Fire: The Illus...	J.K. Rowling	4.9	7758	18	2019	Fiction
156	Harry Potter and the Prisoner of Azkaban: The ...	J.K. Rowling	4.9	3146	30	2017	Fiction
157	Harry Potter and the Sorcerer's Stone: The Ill...	J.K. Rowling	4.9	10952	22	2016	Fiction
174	Humans of the World: Stories	Brandon Stanton	4.9	2812	17	2015	Non Fiction
187	Jesus Calling: Enjoying Peace in His Presence ...	Sarah Young	4.9	19576	8	2011	Non Fiction
188	Jesus Calling: Enjoying Peace in His Presence ...	Sarah Young	4.9	19576	8	2012	Non Fiction
189	Jesus Calling: Enjoying Peace in His Presence ...	Sarah Young	4.9	19576	8	2013	Non Fiction
190	Jesus Calling: Enjoying Peace in His Presence ...	Sarah Young	4.9	19576	8	2014	Non Fiction
191	Jesus Calling: Enjoying Peace in His Presence ...	Sarah Young	4.9	19576	8	2015	Non Fiction
192	Jesus Calling: Enjoying Peace in His Presence ...	Sarah Young	4.9	19576	8	2016	Non Fiction
207	Last Week Tonight with John Oliver Presents A ...	Jill Telfer	4.9	11881	13	2018	Fiction
219	Last Week Tonight with John Oliver Presents A ...	Jill Telfer	4.9	11881	13	2018	Fiction
244	Obama: An Intimate Portrait	Pete Souza	4.9	3192	22	2017	Non Fiction
245	Oh, the Places You'll Go!	Dr. Seuss	4.9	21834	8	2012	Fiction
246	Oh, the Places You'll Go!	Dr. Seuss	4.9	21834	8	2013	Fiction
247	Oh, the Places You'll Go!	Dr. Seuss	4.9	21834	8	2014	Fiction
248	Oh, the Places You'll Go!	Dr. Seuss	4.9	21834	8	2015	Fiction
249	Oh, the Places You'll Go!	Dr. Seuss	4.9	21834	8	2016	Fiction
250	Oh, the Places You'll Go!	Dr. Seuss	4.9	21834	8	2017	Fiction
251	Oh, the Places You'll Go!	Dr. Seuss	4.9	21834	8	2018	Fiction
252	Oh, the Places You'll Go!	Dr. Seuss	4.9	21834	8	2019	Fiction
288	Rush Revere and the Brave Pilgrims: Time-Travel...	Rush Limbaugh	4.9	1570	12	2013	Fiction
289	Rush Revere and the Brave Pilgrims: Time-Travel...	Rush Limbaugh	4.9	3836	12	2014	Fiction
303	Strange Planet (Strange Planet Series)	Nathan W. Pyle	4.9	9382	6	2019	Fiction
420	The Legend of Zelda: Hyrule Historia	Patrick Thorpe	4.9	5396	20	2013	Fiction
431	The Mynola Story	Chp Gaines	4.9	7861	5	2016	Non Fiction
476	The Very Hungry Caterpillar	Eric Carle	4.9	19546	5	2013	Fiction
477	The Very Hungry Caterpillar	Eric Carle	4.9	19546	5	2014	Fiction
478	The Very Hungry Caterpillar	Eric Carle	4.9	19546	5	2015	Fiction
479	The Very Hungry Caterpillar	Eric Carle	4.9	19546	5	2016	Fiction
480	The Very Hungry Caterpillar	Eric Carle	4.9	19546	5	2017	Fiction
481	The Very Hungry Caterpillar	Eric Carle	4.9	19546	5	2018	Fiction
482	The Very Hungry Caterpillar	Eric Carle	4.9	19546	5	2019	Fiction
486	The Wonderful Things You Will Be	Emily Winfield Martin	4.9	6842	10	2016	Fiction
487	The Wonderful Things You Will Be	Emily Winfield Martin	4.9	6842	10	2017	Fiction
488	The Wonderful Things You Will Be	Emily Winfield Martin	4.9	6842	10	2018	Fiction
489	The Wonderful Things You Will Be	Emily Winfield Martin	4.9	6842	10	2019	Fiction
521	Unfreedom of the Press	Mark R. Levin	4.9	5958	11	2019	Non Fiction
545	Wrecking Ball (Diary of a Wimpy Kid Book 14)	Jeff Kinney	4.9	9413	8	2019	Fiction

In [18]:

px.scatter(MaxRating, x='Price', y='Reviews', color='Genre', title='Comparison between best Rating books and reviews')

Out [18]:



In [20]:

#We have 52 books with max value of Rating
MaxRating['User Rating'].count()

Out [20]:

52

In [21]:

#We have 1 book with the lowest score of User Rating
amazon1[amazon1['User Rating'].min()]
MinRating = amazon1.loc[amazon1['User Rating']==0.3]
MinRating

Out [21]:

	Book Name	Author Name	User Rating	Reviews	Price	Year	Genre
353	The Casual Vacancy	J.K. Rowling	3.3	9372	12	2012	Fiction

In [22]:

#Looking for the 10 books with more Reviews
TenMoreReviews = amazon1.sort\_values(by='Reviews', ascending=False).head(10)
TenMoreReviews


Out [22]:

	Book Name	Author Name	User Rating	Reviews	Price	Year	Genre
534	Where the Crawdads Sing	Delia Owens	4.8	87841	15	2019	Fiction
382	The Girl on the Train	Paula Hawkins	4.1	78446	18	2015	Fiction
383	The Girl on the Train	Paula Hawkins	4.1	78446	7	2016	Fiction
32	Becoming	Michele Obama	4.8	61133	11	2018	Non Fiction
137	Gone Girl	Gillian Flynn	4.0	57271	9	2014	Fiction
135	Gone Girl	Gillian Flynn	4.0	57271	10	2012	Fiction
136	Gone Girl	Gillian Flynn	4.0	57271	10	2013	Fiction
368	The Fault in Our Stars	John Green	4.7	50482	13	2014	Fiction
367	The Fault in Our Stars	John Green	4.7	50482	7	2014	Fiction

In [23]:

px.scatter(TenMoreReviews, x='Price', y='User Rating', color='Author Name', title='Comparison between the 10 books with most Reviews and User Rating')

Out [23]:



In [24]:

px.bar(TenMoreReviews, x='Price', y='Reviews', color='Author Name', title='Comparison between the 10 books with most Reviews and User Rating')

Out [24]: