


```
In [2]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from collections import Counter
import re
from datetime import datetime
```

```
In [3]: pd.set_option("display.max_columns", 50)
pd.set_option("display.width", 200)
```

```
In [4]: playo = pd.read_excel("gplay_com.techmash.playo_7ed1cf59.xlsx")
khelo = pd.read_excel("gplay_com.khelomore.pnp_86a518b4.xlsx")
```

```
In [5]: playo
```

Out[5]:

	Unnamed: 0	Unnamed: 1	Author	Date	Rating	Review	Picture included	L
0	1	NaN	Purushotham Reddy	2025-09-25 04:05:51	5	7 7785P s	no	
1	2	NaN	Vivek Mishra	2025-09-25 17:13:54	5	app is sucking		no
2	3	NaN	Shivukumar Pradhani	2025-09-26 16:15:11	1	Issues with slot time selection		no
3	4	NaN	Chandrasekaran Arumugam	2025-09-26 17:48:41	5	excellent app and use full app		no
4	5	NaN	Vivek Shetty	2025-09-27 10:18:47	1	don't wanted injury insurance		no
...
95	96	NaN	Abhishek Malik	2025-11-30 01:49:54	5	Great app to play sports & find like minded folks		no
96	97	NaN	Devesh Gote	2025-11-30 15:01:20	2	Playo Team - Could you please work on function...		no
97	98	NaN	Rohit Naik	2025-12-01 10:05:41	5	very useful!		no
98	99	NaN	Ashish Patel	2025-12-03 10:24:20	1	Unprofessional behaviour by the Playo team. Th...		no
99	100	NaN	Shantanu Moody	2025-12-04 07:18:57	1	Very annoying in the sense that they force not...		no

100 rows × 9 columns



In [6]:

khelo

Out[6]:

	Unnamed: 0	Unnamed: 1	Author	Date	Rating	Review	Picture included	Language
0	1	NaN	Shirish !	2024-11-30 11:45:20	1	There is no option to reschedule the booking. ...	no	en_L
1	2	NaN	Omkar Bilaye	2024-12-03 17:49:56	1	Worst app... they cancel the booking and don't...	no	en_L
2	3	NaN	Yash Dubey	2024-12-03 18:47:23	5	Amazing app very helpful	no	en_L
3	4	NaN	Harsh Kesharia	2024-12-05 18:35:22	3	Youbreally need to have a courteous team and a...	no	en_L
4	5	NaN	Ajay Pathak	2024-12-08 19:52:46	1	Absolutely pathetic user experience Looks like...	no	en_L
...
95	96	NaN	ADITHYA RAJ	2025-11-14 04:16:43	1	CHEATING PEOPLE ON THE TIME SLOT FORMAT . I re...	no	en_L
96	97	NaN	satya narayan	2025-11-17 16:06:29	5	Nice	no	en_L
97	98	NaN	Smruthi Hosamana	2025-11-23 12:13:37	1	pathetic....the booked event / slot keeps disa...	no	en_L
98	99	NaN	naresh talari	2025-11-27 13:23:27	5	very good	no	en_L
99	100	NaN	Manav Salvi	2025-12-04 02:05:44	1	one of the worst experience while trying to re...	no	en_L

100 rows × 9 columns




In [8]:

```
playo = playo.loc[:, ~playo.columns.str.contains("^Unnamed")]
```

playo

Out[8]:

	Author	Date	Rating	Review	Picture included	Language	(view source)
0	Purushotham Reddy	2025-09-25 04:05:51	5	7 7785P s	no	en_US	view review
1	Vivek Mishra	2025-09-25 17:13:54	5	app is sucking 	no	en_US	view review
2	Shivukumar Pradhani	2025-09-26 16:15:11	1	Issues with slot time selection	no	en_US	view review
3	Chandrasekaran Arumugam	2025-09-26 17:48:41	5	excellent app and use full app	no	en_US	view review
4	Vivek Shetty	2025-09-27 10:18:47	1	don't wanted injury insurance	no	en_US	view review
...
95	Abhishek Malik	2025-11-30 01:49:54	5	Great app to play sports & find like minded folks	no	en_US	view review
96	Devesh Gote	2025-11-30 15:01:20	2	Playo Team - Could you please work on function...	no	en_US	view review
97	Rohit Naik	2025-12-01 10:05:41	5	very useful!	no	en_US	view review
98	Ashish Patel	2025-12-03 10:24:20	1	Unprofessional behaviour by the Playo team. Th...	no	en_US	view review
99	Shantanu Moody	2025-12-04 07:18:57	1	Very annoying in the sense that they force not...	no	en_US	view review

100 rows × 7 columns

In [17]: `playo["date"] = pd.to_datetime(playo["date"])`
In [18]: `playo["rating"] = pd.to_numeric(playo["rating"], errors="coerce")
playo = playo.dropna(subset=["rating", "review"])
playo["review"] = playo["review"].astype(str).str.strip()
playo`

Out[18]:

	author	date	rating	review	picture_included	language	(view source)
0	Purushotham Reddy	2025-09-25 04:05:51	5	7 7785P s	no	en_US	view review
1	Vivek Mishra	2025-09-25 17:13:54	5	app is sucking 🤮	no	en_US	view review
2	Shivukumar Pradhani	2025-09-26 16:15:11	1	Issues with slot time selection	no	en_US	view review
3	Chandrasekaran Arumugam	2025-09-26 17:48:41	5	excellent app and use full app	no	en_US	view review
4	Vivek Shetty	2025-09-27 10:18:47	1	don't wanted injury insurance	no	en_US	view review
...
95	Abhishek Malik	2025-11-30 01:49:54	5	Great app to play sports & find like minded folks	no	en_US	view review
96	Devesh Gote	2025-11-30 15:01:20	2	Playo Team - Could you please work on function...	no	en_US	view review
97	Rohit Naik	2025-12-01 10:05:41	5	very useful!	no	en_US	view review
98	Ashish Patel	2025-12-03 10:24:20	1	Unprofessional behaviour by the Playo team. Th...	no	en_US	view review
99	Shantanu Moody	2025-12-04 07:18:57	1	Very annoying in the sense that they force not...	no	en_US	view review

100 rows × 8 columns



In [20]:

```
khelo = khelo.loc[:, ~khelo.columns.str.contains("^Unnamed")]  
khelo
```

Out[20]:

	Author	Date	Rating	Review	Picture included	Language	(view source)
0	Shirish !	2024-11-30 11:45:20	1	There is no option to reschedule the booking. ...	no	en_US	view review
1	Omkar Bilaye	2024-12-03 17:49:56	1	Worst app... they cancel the booking and don't...	no	en_US	view review
2	Yash Dubey	2024-12-03 18:47:23	5	Amazing app very helpful	no	en_US	view review
3	Harsh Kesharia	2024-12-05 18:35:22	3	Youbreally need to have a courteous team and a...	no	en_US	view review
4	Ajay Pathak	2024-12-08 19:52:46	1	Absolutely pathetic user experience Looks like...	no	en_US	view review
...
95	ADITHYA RAJ	2025-11-14 04:16:43	1	CHEATING PEOPLE ON THE TIME SLOT FORMAT . I re...	no	en_US	view review
96	satya narayan	2025-11-17 16:06:29	5	Nice	no	en_US	view review
97	Smruthi Hosamana	2025-11-23 12:13:37	1	pathetic....the booked event / slot keeps disa...	no	en_US	view review
98	naresh talari	2025-11-27 13:23:27	5	very good	no	en_US	view review
99	Manav Salvi	2025-12-04 02:05:44	1	one of the worst experiance while trying to re...	no	en_US	view review

100 rows × 7 columns

In [21]:

```
khelo["Date"] = pd.to_datetime(khelo["Date"])
khelo["Rating"] = pd.to_numeric(khelo["Rating"], errors="coerce")
khelo = khelo.dropna(subset=["Rating", "Review"])
khelo["Review"] = khelo["Review"].astype(str).str.strip()
```

In [22]:

```
khelo
```

Out[22]:

	Author	Date	Rating	Review	Picture included	Language	(view source)	Date\t
0	Shirish !	2024-11-30 11:45:20	1	There is no option to reschedule the booking. ...	no	en_US	view review	2024-11-30 11:45:20
1	Omkar Bilaye	2024-12-03 17:49:56	1	Worst app... they cancel the booking and don't...	no	en_US	view review	2024-12-03 17:49:56
2	Yash Dubey	2024-12-03 18:47:23	5	Amazing app very helpful	no	en_US	view review	2024-12-03 18:47:23
3	Harsh Kesharia	2024-12-05 18:35:22	3	Youbreally need to have a courteous team and a...	no	en_US	view review	2024-12-05 18:35:22
4	Ajay Pathak	2024-12-08 19:52:46	1	Absolutely pathetic user experience Looks like...	no	en_US	view review	2024-12-08 19:52:46
...
95	ADITHYA RAJ	2025-11-14 04:16:43	1	CHEATING PEOPLE ON THE TIME SLOT FORMAT . I re...	no	en_US	view review	2025-11-14 04:16:43
96	satya narayan	2025-11-17 16:06:29	5	Nice	no	en_US	view review	2025-11-17 16:06:29
97	Smruthi Hosamana	2025-11-23 12:13:37	1	pathetic....the booked event / slot keeps disa...	no	en_US	view review	2025-11-23 12:13:37
98	naresh talari	2025-11-27 13:23:27	5	very good	no	en_US	view review	2025-11-27 13:23:27
99	Manav Salvi	2025-12-04 02:05:44	1	one of the worst experience while trying to re...	no	en_US	view review	2025-12-04 02:05:44

100 rows × 8 columns

In [23]: rating1 = playo["rating"].describe().round(2)
rating1

```
Out[23]: count    100.00
         mean      2.91
         std       1.83
         min       1.00
         25%       1.00
         50%       3.00
         75%       5.00
         max       5.00
         Name: rating, dtype: float64
```

```
In [24]: rating2 = khelo["Rating"].describe().round(2)
         rating2
```

```
Out[24]: count    100.00
         mean      3.50
         std       1.85
         min       1.00
         25%       1.00
         50%       5.00
         75%       5.00
         max       5.00
         Name: Rating, dtype: float64
```

```
In [59]: distribution1 = playo["rating"].value_counts().sort_index()
         distribution1
```

```
Out[59]: rating
         1    42
         2     7
         3     7
         4     6
         5    38
         Name: count, dtype: int64
```

```
In [25]: distribution2 = khelo["Rating"].value_counts().sort_index()
         distribution2
```

```
Out[25]: Rating
         1    33
         2     2
         3     3
         4     6
         5    56
         Name: count, dtype: int64
```

```
In [26]: playo["month"] = playo["date"].dt.to_period("M")
         monthly_avg = playo.groupby("month")["rating"].mean().reset_index()
         monthly_avg["month"] = monthly_avg["month"].astype(str)
         playo
```


Out[26]:

	author	date	rating	review	picture_included	language	(view source)
0	Purushotham Reddy	2025-09-25 04:05:51	5	7 7785P s	no	en_US	view review
1	Vivek Mishra	2025-09-25 17:13:54	5	app is sucking 🤮	no	en_US	view review
2	Shivukumar Pradhani	2025-09-26 16:15:11	1	Issues with slot time selection	no	en_US	view review
3	Chandrasekaran Arumugam	2025-09-26 17:48:41	5	excellent app and use full app	no	en_US	view review
4	Vivek Shetty	2025-09-27 10:18:47	1	don't wanted injury insurance	no	en_US	view review
...
95	Abhishek Malik	2025-11-30 01:49:54	5	Great app to play sports & find like minded folks	no	en_US	view review
96	Devesh Gote	2025-11-30 15:01:20	2	Playo Team - Could you please work on function...	no	en_US	view review
97	Rohit Naik	2025-12-01 10:05:41	5	very useful!	no	en_US	view review
98	Ashish Patel	2025-12-03 10:24:20	1	Unprofessional behaviour by the Playo team. Th...	no	en_US	view review
99	Shantanu Moody	2025-12-04 07:18:57	1	Very annoying in the sense that they force not...	no	en_US	view review

100 rows × 9 columns



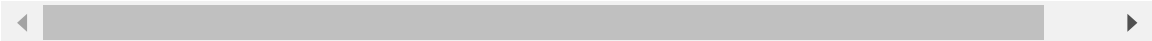
In [27]:

```
khelo["month"] = khelo["Date"].dt.to_period("M")
monthly_avg = khelo.groupby("month")["Rating"].mean().reset_index()
monthly_avg["month"] = monthly_avg["month"].astype(str)
khelo
```

Out[27]:

	Author	Date	Rating	Review	Picture included	Language	(view source)	Date\time	nr
0	Shirish !	2024-11-30 11:45:20	1	There is no option to reschedule the booking. ...	no	en_US	view review	2024-11-30 11:45:20	
1	Omkar Bilaye	2024-12-03 17:49:56	1	Worst app... they cancel the booking and don't...	no	en_US	view review	2024-12-03 17:49:56	
2	Yash Dubey	2024-12-03 18:47:23	5	Amazing app very helpful	no	en_US	view review	2024-12-03 18:47:23	
3	Harsh Kesharia	2024-12-05 18:35:22	3	Youbreally need to have a courteous team and a...	no	en_US	view review	2024-12-05 18:35:22	
4	Ajay Pathak	2024-12-08 19:52:46	1	Absolutely pathetic user experience Looks like...	no	en_US	view review	2024-12-08 19:52:46	
...
95	ADITHYA RAJ	2025-11-14 04:16:43	1	CHEATING PEOPLE ON THE TIME SLOT FORMAT . I re...	no	en_US	view review	2025-11-14 04:16:43	
96	satya narayan	2025-11-17 16:06:29	5	Nice	no	en_US	view review	2025-11-17 16:06:29	
97	Smruthi Hosamana	2025-11-23 12:13:37	1	pathetic....the booked event / slot keeps disa...	no	en_US	view review	2025-11-23 12:13:37	
98	naresh talari	2025-11-27 13:23:27	5	very good	no	en_US	view review	2025-11-27 13:23:27	
99	Manav Salvi	2025-12-04 02:05:44	1	one of the worst experience while trying to re...	no	en_US	view review	2025-12-04 02:05:44	

100 rows × 9 columns




In [28]:

```
playo["review_len"] = playo["review"].str.len()
review_len_summary = playo["review_len"].describe().round(2)
```

```
language_distribution = playo["language"].value_counts()
playo
```

Out[28]:

	author	date	rating	review	picture_included	language	(view source)
0	Purushotham Reddy	2025-09-25 04:05:51	5	7 7785P s	no	en_US	view review
1	Vivek Mishra	2025-09-25 17:13:54	5	app is sucking 	no	en_US	view review
2	Shivukumar Pradhani	2025-09-26 16:15:11	1	Issues with slot time selection	no	en_US	view review
3	Chandrasekaran Arumugam	2025-09-26 17:48:41	5	excellent app and use full app	no	en_US	view review
4	Vivek Shetty	2025-09-27 10:18:47	1	don't wanted injury insurance	no	en_US	view review
...
95	Abhishek Malik	2025-11-30 01:49:54	5	Great app to play sports & find like minded folks	no	en_US	view review
96	Devesh Gote	2025-11-30 15:01:20	2	Playo Team - Could you please work on function...	no	en_US	view review
97	Rohit Naik	2025-12-01 10:05:41	5	very useful!	no	en_US	view review
98	Ashish Patel	2025-12-03 10:24:20	1	Unprofessional behaviour by the Playo team. Th...	no	en_US	view review
99	Shantanu Moody	2025-12-04 07:18:57	1	Very annoying in the sense that they force not...	no	en_US	view review

100 rows × 10 columns



```
In [29]: khelo["review_len"] = khelo["Review"].str.len()
review_len_summary = khelo["review_len"].describe().round(2)
language_distribution = khelo["Language"].value_counts()
khelo
```

Out[29]:

	Author	Date	Rating	Review	Picture included	Language	(view source)	Date\time	nr
0	Shirish !	2024-11-30 11:45:20	1	There is no option to reschedule the booking. ...	no	en_US	view review	2024-11-30 11:45:20	
1	Omkar Bilaye	2024-12-03 17:49:56	1	Worst app... they cancel the booking and don't...	no	en_US	view review	2024-12-03 17:49:56	
2	Yash Dubey	2024-12-03 18:47:23	5	Amazing app very helpful	no	en_US	view review	2024-12-03 18:47:23	
3	Harsh Kesharia	2024-12-05 18:35:22	3	Youbreally need to have a courteous team and a...	no	en_US	view review	2024-12-05 18:35:22	
4	Ajay Pathak	2024-12-08 19:52:46	1	Absolutely pathetic user experience Looks like...	no	en_US	view review	2024-12-08 19:52:46	
...
95	ADITHYA RAJ	2025-11-14 04:16:43	1	CHEATING PEOPLE ON THE TIME SLOT FORMAT . I re...	no	en_US	view review	2025-11-14 04:16:43	
96	satya narayan	2025-11-17 16:06:29	5	Nice	no	en_US	view review	2025-11-17 16:06:29	
97	Smruthi Hosamana	2025-11-23 12:13:37	1	pathetic....the booked event / slot keeps disa...	no	en_US	view review	2025-11-23 12:13:37	
98	naresh talari	2025-11-27 13:23:27	5	very good	no	en_US	view review	2025-11-27 13:23:27	
99	Manav Salvi	2025-12-04 02:05:44	1	one of the worst experience while trying to re...	no	en_US	view review	2025-12-04 02:05:44	

100 rows × 10 columns



In [30]: `def sentiment_bucket(r):
 if r >= 4:`

```

        return "positive"
    elif r <= 2:
        return "negative"
    else:
        return "neutral"

```

```
In [31]: playo["sentiment"] = playo["rating"].apply(sentiment_bucket)
```

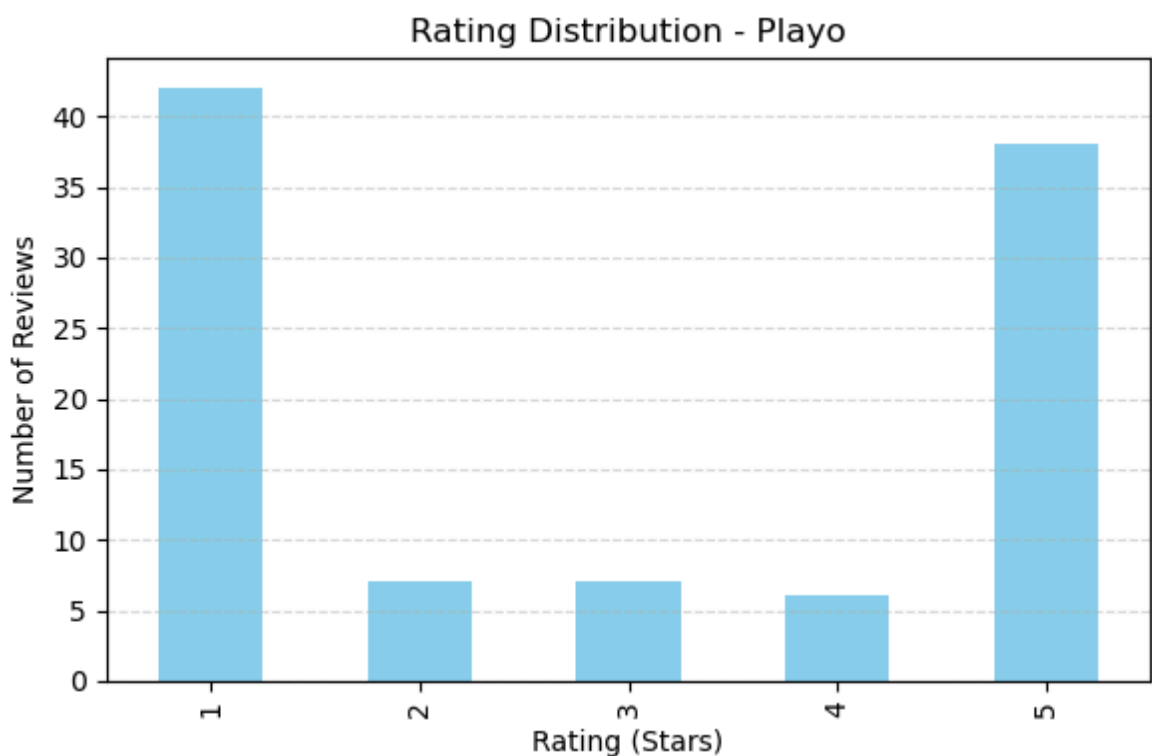
```
In [32]: sentiment1 = playo["sentiment"].value_counts()
sentiment1
```

```
Out[32]: sentiment
negative    49
positive    44
neutral      7
Name: count, dtype: int64
```

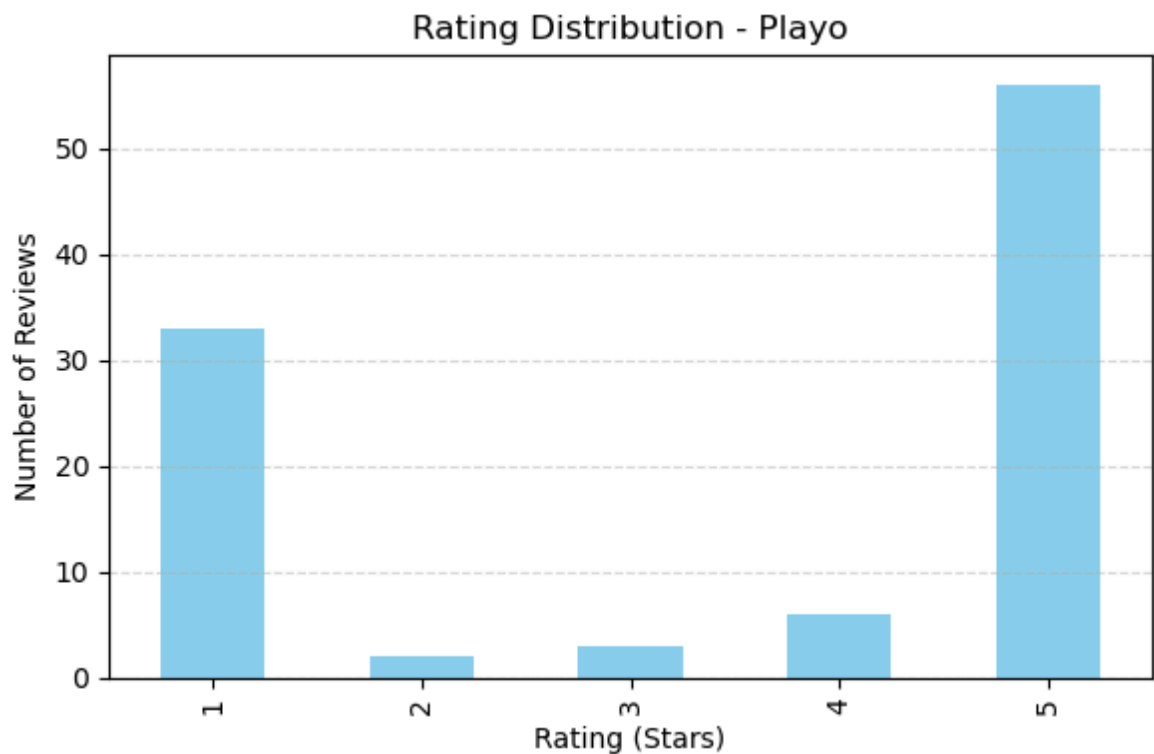
```
In [33]: khelo["sentiment"] = khelo["Rating"].apply(sentiment_bucket)
sentiment2 = khelo["sentiment"].value_counts()
sentiment2
```

```
Out[33]: sentiment
positive    62
negative    35
neutral      3
Name: count, dtype: int64
```

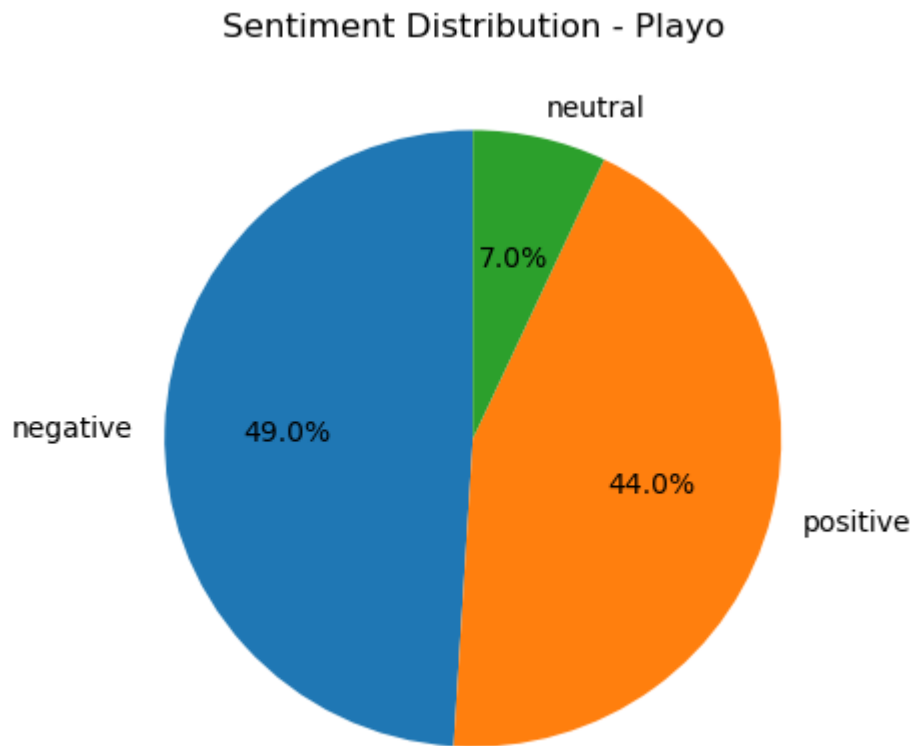
```
In [34]: plt.figure(figsize=(6,4))
playo["rating"].value_counts().sort_index().plot(kind="bar", color="skyblue")
plt.title("Rating Distribution - Playo")
plt.xlabel("Rating (Stars)")
plt.ylabel("Number of Reviews")
plt.grid(axis="y", linestyle="--", alpha=0.5)
plt.tight_layout()
plt.show()
```



```
In [35]: plt.figure(figsize=(6,4))
khelo["Rating"].value_counts().sort_index().plot(kind="bar", color="skyblue")
plt.title("Rating Distribution - Playo")
plt.xlabel("Rating (Stars)")
plt.ylabel("Number of Reviews")
plt.grid(axis="y", linestyle="--", alpha=0.5)
plt.tight_layout()
plt.show()
```



```
In [36]: plt.figure(figsize=(5,5))
sentiment1.plot(kind="pie", autopct="%1.1f%", startangle=90, ylabel="")
plt.title("Sentiment Distribution - Playo")
plt.show()
```



```
In [37]: plt.figure(figsize=(5,5))
sentiment2.plot(kind="pie", autopct="%1.1f%%", startangle=90, ylabel="")
plt.title("Sentiment Distribution - Playo")
plt.show()
```

