```
from google.colab import drive
drive.mount('/content/drive', force_remount=True)
path = "/content/drive/My Drive/магистратура/2 семестр/ммо"

import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

```
Mounted at /content/drive
```

```
data = pd.read_csv(path+'/Video_Games_Sales.csv')
```

```
data.head()
```

	Name	Platform	Year_of_Release	Genre	Publisher	NA_Sales	EU_Sale
0	Wii Sports	Wii	2006.0	Sports	Nintendo	41.36	28.9
1	Super Mario Bros.	NES	1985.0	Platform	Nintendo	29.08	3.5
2	Mario Kart Wii	Wii	2008.0	Racing	Nintendo	15.68	12.7
3	Wii Sports Resort	Wii	2009.0	Sports	Nintendo	15.61	10.9
4	Pokemon Red/Pokemon Blue	GB	1996.0	Role-Playing	Nintendo	11.27	8.8

```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 16719 entries, 0 to 16718
Data columns (total 16 columns):
 #   Column           Non-Null Count  Dtype  
---  ------           --------------  -----  
 0   Name             16717 non-null  object 
 1   Platform         16719 non-null  object 
 2   Year_of_Release  16450 non-null  float64
 3   Genre            16717 non-null  object 
 4   Publisher        16665 non-null  object 
 5   NA_Sales         16719 non-null  float64
 6   EU_Sales         16719 non-null  float64
 7   JP_Sales         16719 non-null  float64
 8   Other_Sales      16719 non-null  float64
 9   Global_Sales     16719 non-null  float64
 10  Critic_Score     8137 non-null   float64
 11  Critic_Count     8137 non-null   float64
 12  User_Score       10015 non-null  object 
 13  User_Count       7590 non-null   float64
 14  Developer        10096 non-null  object 
 15  Rating           9950 non-null   object 
```

```
dtypes: float64(9), object(7)
memory usage: 2.0+ MB
```

```
data.isnull().all()
```

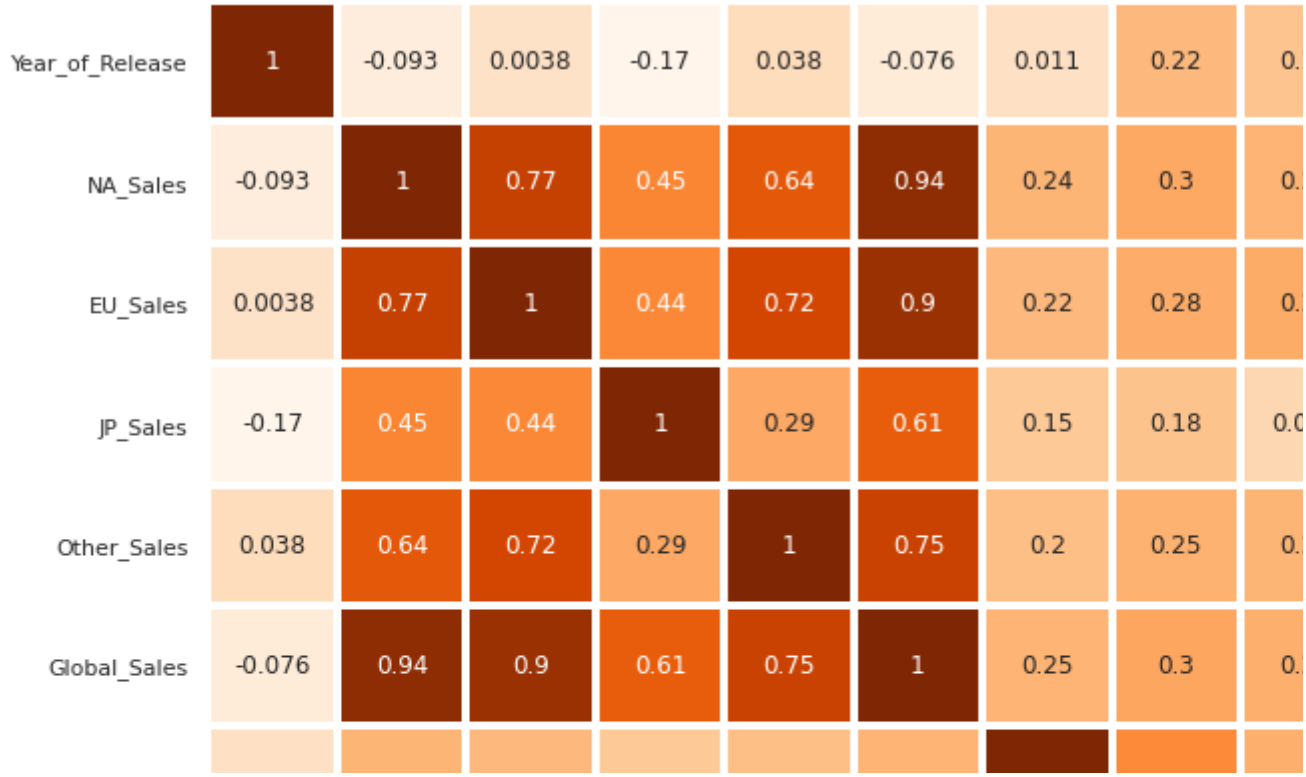
```
Name               False
Platform           False
Year_of_Release    False
Genre              False
Publisher          False
NA_Sales           False
EU_Sales           False
JP_Sales           False
Other_Sales        False
Global_Sales       False
Critic_Score       False
Critic_Count       False
User_Score         False
User_Count         False
Developer          False
Rating             False
dtype: bool
```

```
data["EU_Sales"].value_counts()
```

```
0.00    5874
0.01    1494
0.02    1308
0.03     926
0.04     709
        ...
3.59       1
4.02       1
2.24       1
2.27       1
3.75       1
Name: EU_Sales, Length: 307, dtype: int64
```

```
plt.figure(figsize=(13,10))
sns.heatmap(data.corr(), cmap="Oranges", annot=True, linewidths=3)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f62f0ccbc90>
```




```
plt.figure(figsize=(13,10))
sns.countplot(x="Platform", data=data, order=data["Platform"].value_counts().inde
```

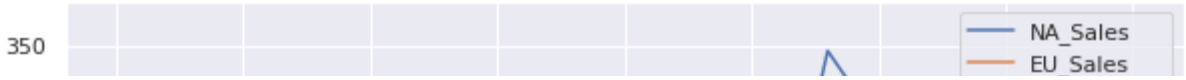
```
<matplotlib.axes._subplots.AxesSubplot at 0x7f62f2af0150>
```

```
sales_data_year = data.groupby(by="Year_of_Release").sum()
sales_data_year.drop(columns=["Global_Sales", "Critic_Score", "Critic_Count", "Us
sales_data_year
```

Year_of_Release	NA_Sales	EU_Sales	JP_Sales	Other_Sales
1980.0	10.59	0.67	0.00	0.12
1981.0	33.40	1.96	0.00	0.32
1982.0	26.92	1.65	0.00	0.31
1983.0	7.76	0.80	8.10	0.14
1984.0	33.28	2.10	14.27	0.70
1985.0	33.73	4.74	14.56	0.92
1986.0	12.50	2.84	19.81	1.93
1987.0	8.46	1.41	11.63	0.20
1988.0	23.87	6.59	15.76	0.99
1989.0	45.15	8.44	18.36	1.50
1990.0	25.46	7.63	14.88	1.40

```
sales_data_year = sales_data_year.apply(lambda x: x.astype("int"))
sales_data_year.plot.line(figsize=(10,10), grid="on");
plt.ylabel("Sales")
```

```
Text(0, 0.5, 'Sales')
```



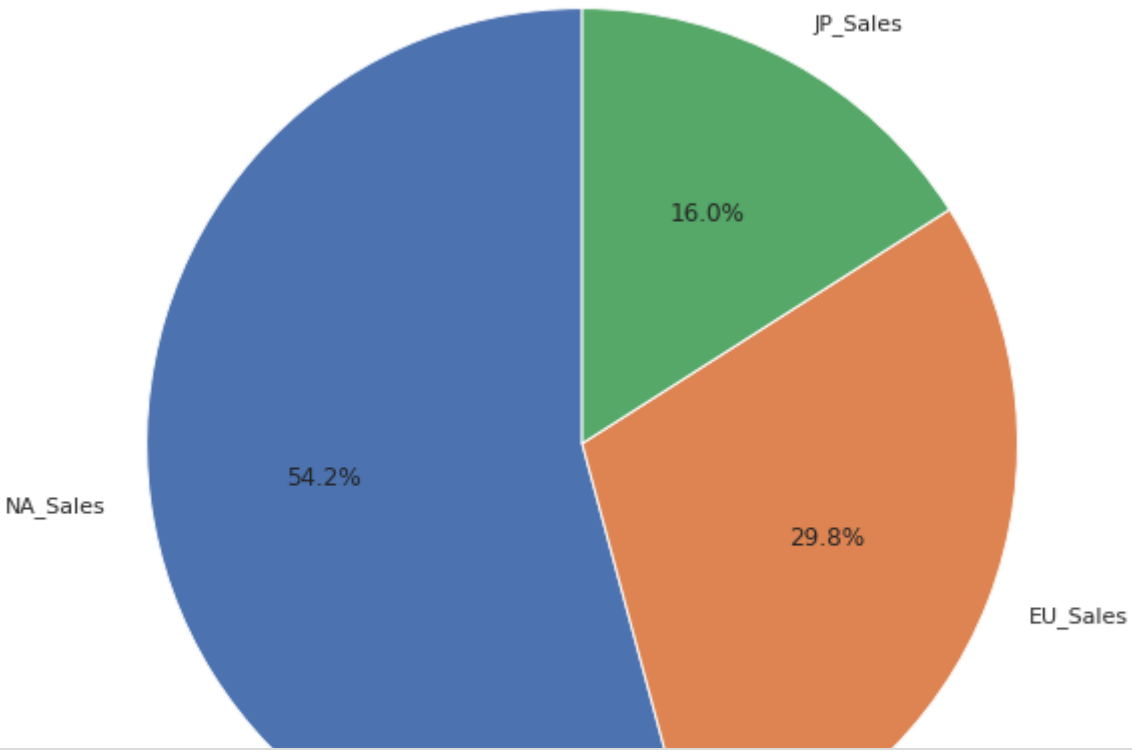

```
sales_region = data[["NA_Sales", "EU_Sales", "JP_Sales"]]
sales_region = sales_region.sum().reset_index()
sales_region = sales_region.rename(columns={"index": "region", 0: "sale"})
sales_region
```

	region	sale
0	NA_Sales	4402.62
1	EU_Sales	2424.67
2	JP_Sales	1297.43

```
values = sales_region["region"]
sizes = sales_region["sale"]
```

```
plt.figure(figsize=(10,10))
plt.pie(sizes, labels=values, autopct="%1.1f%%", startangle=90)
```

```
([<matplotlib.patches.Wedge at 0x7f62f4056150>,
  <matplotlib.patches.Wedge at 0x7f62f4060ad0>,
  <matplotlib.patches.Wedge at 0x7f62f419fcd0>],
 [Text(-1.0904930590581252, -0.14430830934514013, 'NA_Sales'),
  Text(1.0255163791147273, -0.397889628122447, 'EU_Sales'),
  Text(0.5289876929807663, 0.964454260540585, 'JP_Sales')],
 [Text(-0.5948143958498864, -0.07871362327916734, '54.2%'),
  Text(0.5593725704262148, -0.21703070624860743, '29.8%'),
```



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