# PROJECT REPORT ON

# “ANALYSIS OF THE APPLICATIONS ON GOOGLE PLAY STORE”

**By,**

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**PROBLEM STATEMENT**

Analysis of the Applications on Google Play Store

**MOTIVATION**

Detailed analysis of information of apps in Google play store in order to provide insights on the commercial success of apps and the current state of android app market.

Comparing the apps available on Google play store based on the following criteria-

1. Rating
2. Reviews
3. No. of installations
4. Content rating
5. Type of app etc.

**INSIGHTS DERIVED FROM THE ANALYSIS**

The following are the insights derived from the analysis of certain apps on Google Play Store-

1. How ratings and reviews affect the installation of an application?
   Any user before installing an application looks for the ratings and reviews given by the other users and accordingly takes a decision whether to install that particular app or not. If the ratings are below 3, then the chances of that app being installed is very less.

2. How size of an app affects the installation of an application?

   In this digital era where apps have made our lives easier, size of an app is the biggest constraint. If the size of the app is considerably small, chances of that being installed by the users will be high. Ex- The size of the WeChat app when it was launched in India was 40 mb. Most popular mobile phones in India at that tie came with 200 mb of internally memory. That's the reason for the failure of WeChat in India.

3. How sponsored advertisements affect the installation of an application?

   Advertisements getting popped up every now and then while using the app creates irritation in the minds of the users and which eventually leads to uninstalling that app.

4. How geographical location affects the installation of an application? (WhatsApp being commercially very successful in India)

   Native apps seldom find success on a global scale. Ex- WeChat being successful in China and not in India while WhatsApp becoming a huge success in India.

5. How age and sex of the user affects the installation of the application?

   Different age groups have different needs, interests, preferences etc. Ex- Gaming apps are majorly being installed by the age group between 15-25.

6. How operating system affects the number of installations of the application?

   Certain apps are only compatible on Android and not on IoS. So, an app should be developed in such a way that it should be compatible on all operating system paltforms.

7. What is the reliability of an application vis-a-vis date security?

   Apps should not steal personal information which puts the lives of the users in peril.

8. How flooding of information by way of push notifications affects the usage of the application?

   28% of people have uninstalled the app because of too many notifications. Push notifications distract the user and leads to less productivity and thereby resulting in getting uninstalled.

## WHO CAN POTENTIALLY BENEFIT FROM THIS STUDY?

### App Developers-

With this kind of study, the app developers can develop an application to target the potential users.

Ex- As seen in the data set, medicine apps are paid apps and thereby the number of installations are relatively less. For an app developer to become commercially successful he should develop a medicine app and make it an unpaid off so that many people will be benefited out of it. It is a win-win situation for the app developers and the users.

## CODES IMPLEMENTED

### Code No. 1

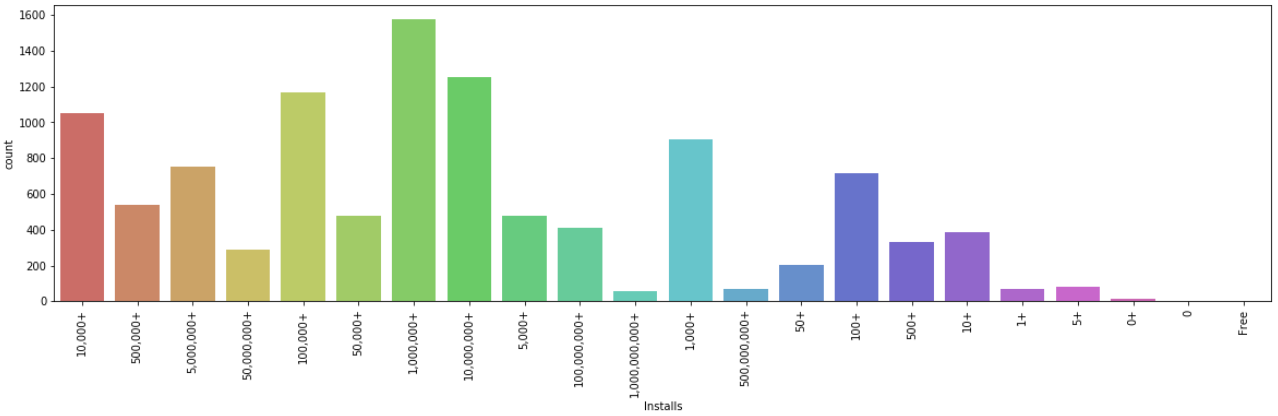
```
import pandas as pd
from importlib import reload
import sys
from imp import reload
if sys.version[0] == '2':
    reload(sys)
    sys.setdefaultencoding("utf-8")

import warnings
warnings.filterwarnings('ignore')

df=pd.read_csv("googleplaystore.csv")
df.head()
```

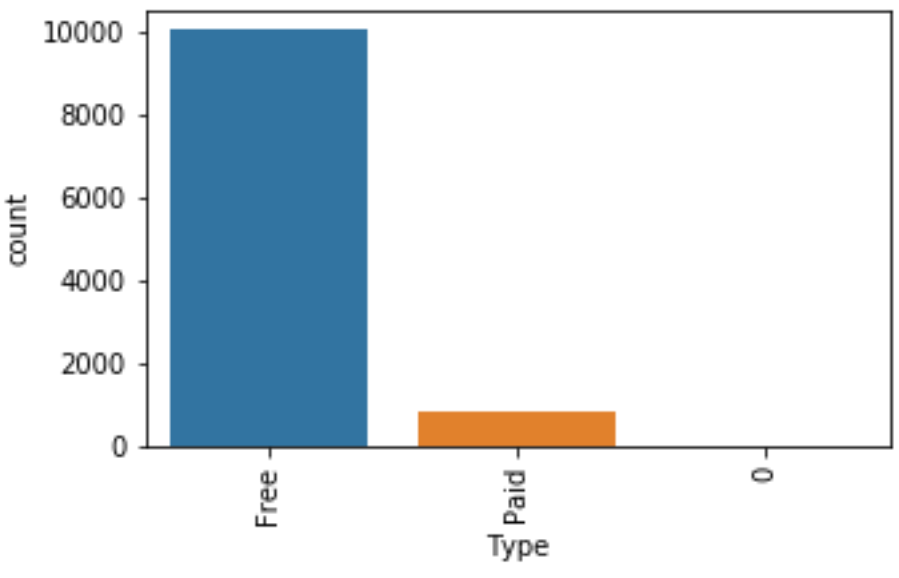
**Code No. 2**

```
import seaborn as sns
import matplotlib.pyplot as plt
plt.figure(figsize=(20,5))
fig = sns.countplot(x=df['Installs'], palette="hls")
fig.set_xticklabels(fig.get_xticklabels(),rotation=90)
plt.show(fig)
```



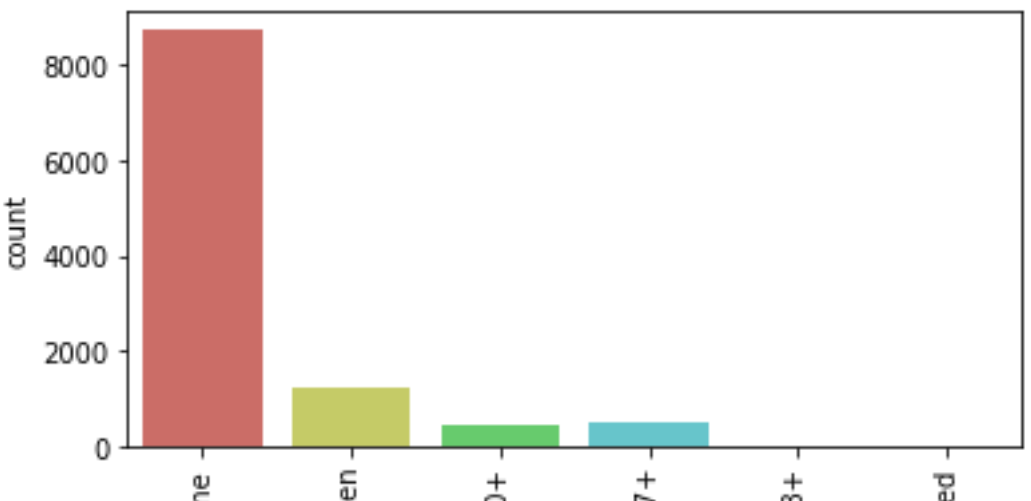
**Code No. 3**

```
import seaborn as sns
import matplotlib.pyplot as plt
plt.figure(figsize=(5,3))
fig = sns.countplot(x=df['Type'])
fig.set_xticklabels(fig.get_xticklabels(),rotation=90)
plt.show(fig)
```



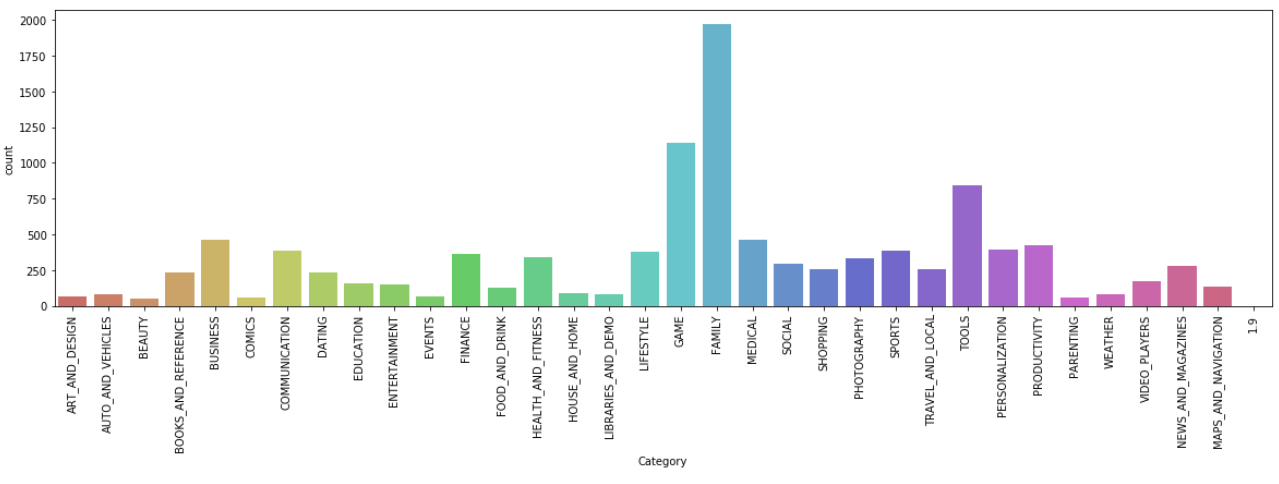
**Code No. 4**

```
import seaborn as sns
import matplotlib.pyplot as plt
plt.figure(figsize=(6,3))
fig = sns.countplot(x=df['Content Rating'], palette="hls")
fig.set_xticklabels(fig.get_xticklabels(),rotation=90)
plt.show(fig)
```



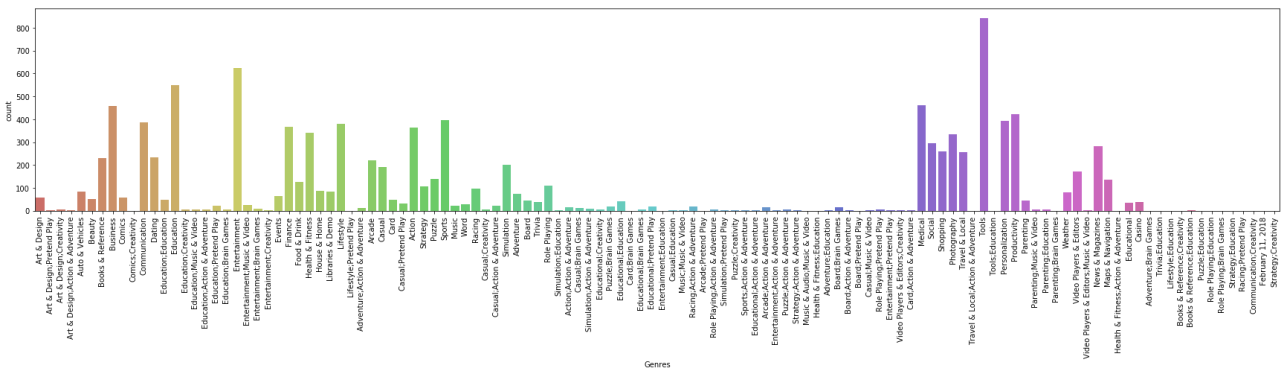
**Code No. 5**

```
import seaborn as sns
import matplotlib.pyplot as plt
plt.figure(figsize=(20,5))
fig = sns.countplot(x=df['Category'], palette="hls")
fig.set_xticklabels(fig.get_xticklabels(),rotation=90)
plt.show(fig)
```



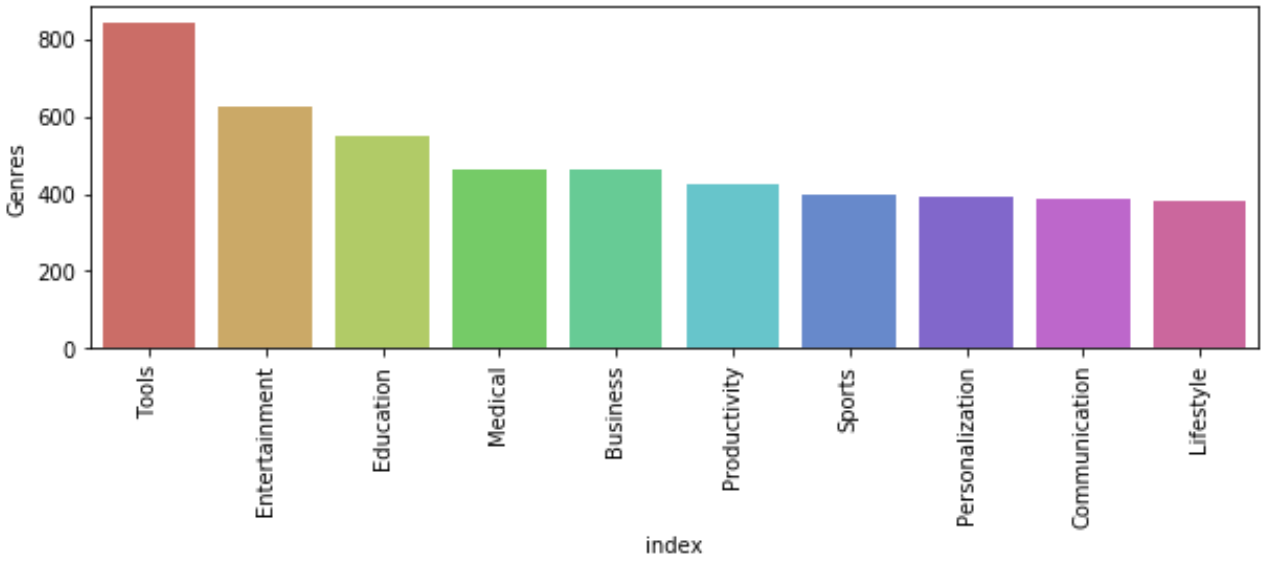
**Code No. 6**

```
import seaborn as sns
import matplotlib.pyplot as plt
plt.figure(figsize=(30,5))
fig = sns.countplot(x=df['Genres'], palette="hls")
fig.set_xticklabels(fig.get_xticklabels(),rotation=90)
plt.show(fig)
```



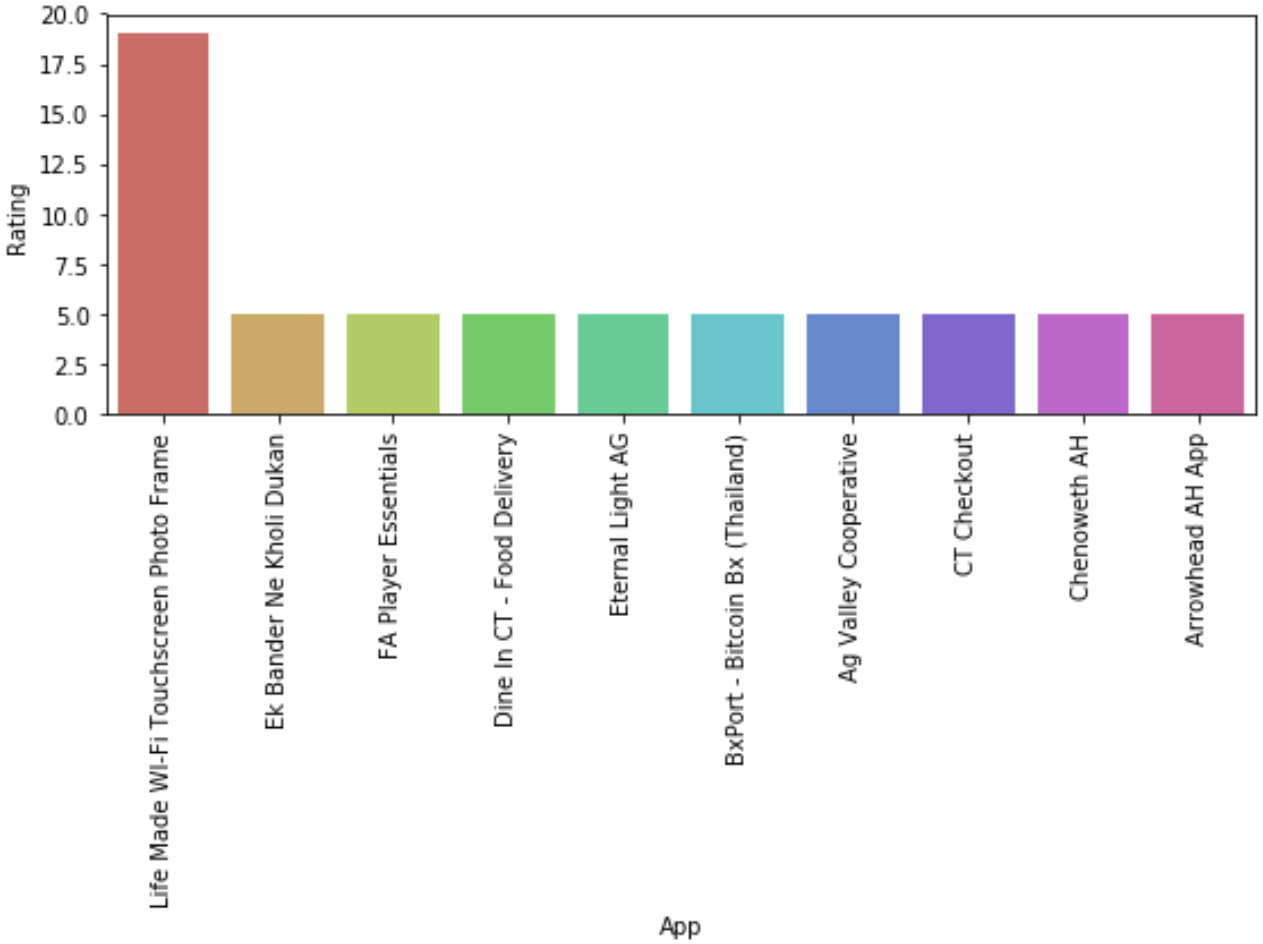
**Code No. 7**

```
import seaborn as sns
import matplotlib.pyplot as plt
plt.figure(figsize=(10,3))
fig = sns.barplot(y=df['Genres'].value_counts().reset_index()[:10]['Genres'],
x=df['Genres'].value_counts().reset_index()[:10]['index'], palette="hls")
fig.set_xticklabels(fig.get_xticklabels(),rotation=90)
plt.show(fig)
```

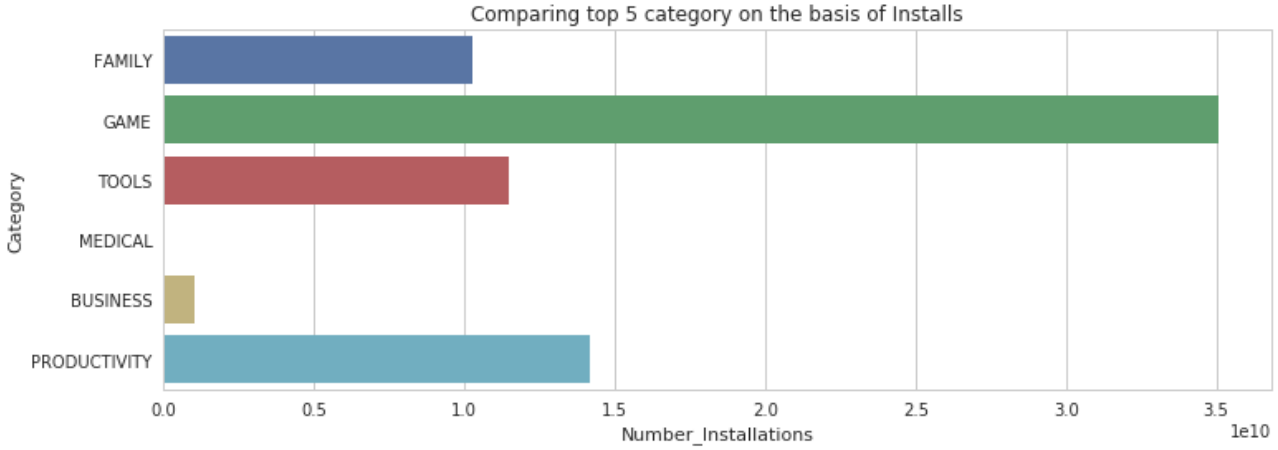


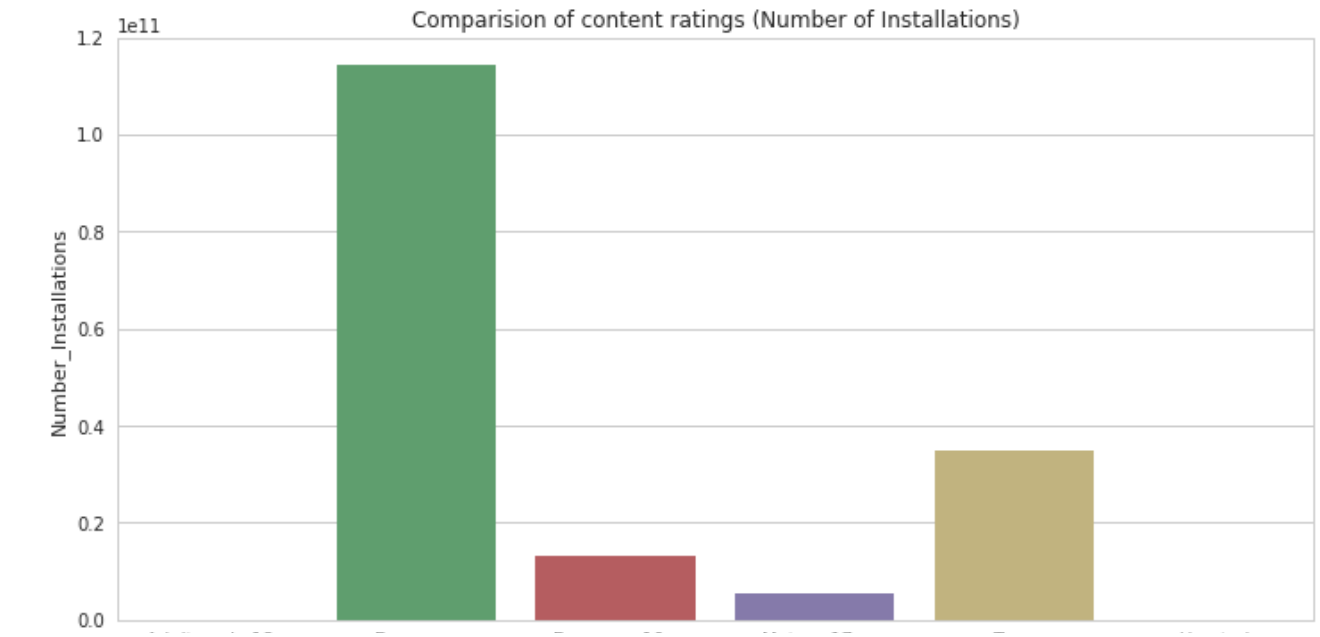

**Code No. 8**

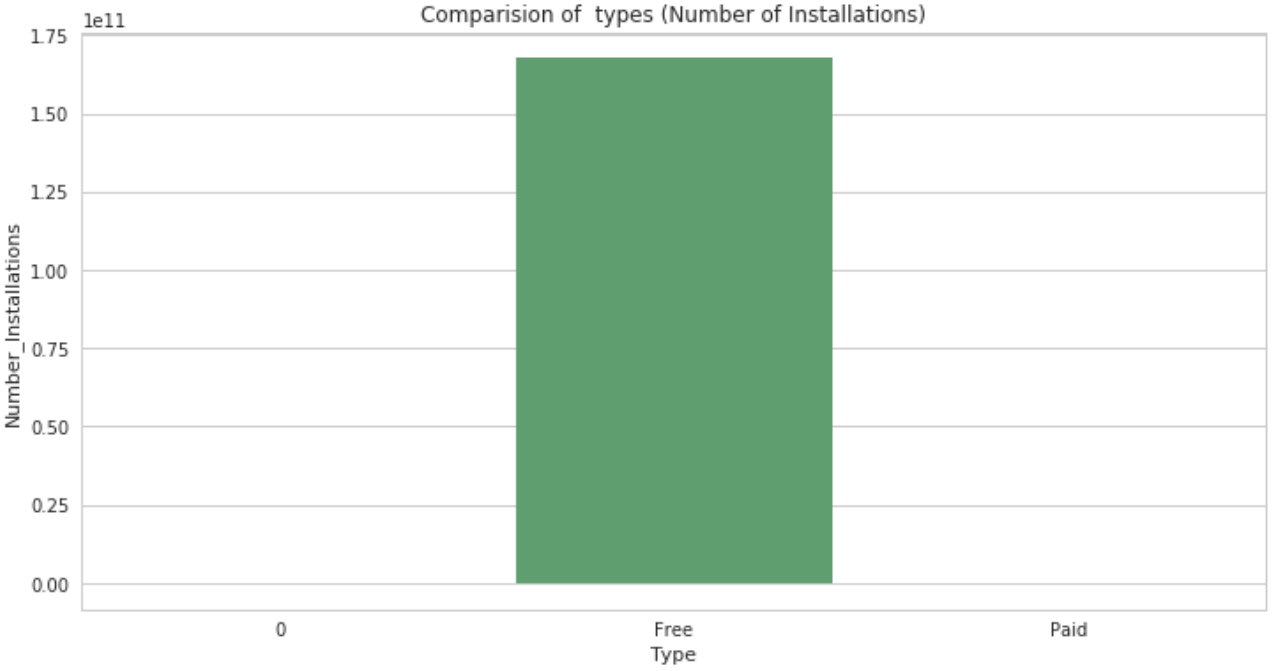
```
plt.figure(figsize=(8,6))
fig = sns.barplot(x=sorted_by_rating['App'][:10], y=sorted_by_rating['Rating'][:10], palette="hls")
fig.set_xticklabels(fig.get_xticklabels(),rotation=90)
plt.tight_layout()
plt.show(fig)
```




## OTHER VISUALIZATIONS OBSERVED




Comparision of content ratings (Number of Installations)
1e11
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Number_Installations


Comparision of types (Number of Installations)
1e11
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
Number_Installations
0
Free
Paid
Type