In [1]:
```
# importing mecessary libraries

import pandas as pd
import matplotlib.pyplot as plt
import matplotlib as mpl
import numpy as np
import seaborn as sns
from sklearn.linear_model import LinearRegression
```

In [2]:
```
# reading file

path='tv_shows.csv'
df = pd.read_csv(path)
df.head()
```

Out[2]:

	Unnamed: 0	Title	Year	Age	IMDb	Rotten Tomatoes	Netflix	Hulu	Prime Video	Disney+	type
0	0	Breaking Bad	2008	18+	9.5	96%	1	0	0	0	1
1	1	Stranger Things	2016	16+	8.8	93%	1	0	0	0	1
2	2	Money Heist	2017	18+	8.4	91%	1	0	0	0	1
3	3	Sherlock	2010	16+	9.1	78%	1	0	0	0	1
4	4	Better Call Saul	2015	18+	8.7	97%	1	0	0	0	1

In [3]:
```
print(df.dtypes)
```

```
Unnamed: 0           int64
Title               object
Year                 int64
Age                 object
IMDb               float64
Rotten Tomatoes     object
Netflix              int64
Hulu                 int64
Prime Video          int64
Disney+              int64
type                 int64
dtype: object
```

In [4]:
```
# dropping columns

df.drop('Unnamed: 0', axis=1, inplace=True)
df.drop('type', axis=1, inplace=True)
```

In [5]:
```
# replacing nan values

df.replace(np.nan, 0, inplace=True)
df.replace('all', 'All', inplace=True)
```

In [6]:
```
df['Age'].value_counts()

# replacing values

df['Age'].replace(0,'All', inplace=True)
```

In [7]:
```
df.head()
```

Out[7]:

	Title	Year	Age	IMDb	Rotten Tomatoes	Netflix	Hulu	Prime Video	Disney+
0	Breaking Bad	2008	18+	9.5	96%	1	0	0	0
1	Stranger Things	2016	16+	8.8	93%	1	0	0	0
2	Money Heist	2017	18+	8.4	91%	1	0	0	0
3	Sherlock	2010	16+	9.1	78%	1	0	0	0
4	Better Call Saul	2015	18+	8.7	97%	1	0	0	0

In [8]:
```
df.tail(10)
```

Out[8]:

	Title	Year	Age	IMDb	Rotten Tomatoes	Netflix	Hulu	Prime Video	Disney+
5601	Disney Junior Music Nursery Rhymes	2017	All	6.6	0	0	0	0	1
5602	Bug Juice: My Adventures at Camp	2018	All	7.2	0	0	0	0	1
5603	Disney Insider	2012	All	0.0	0	0	0	0	1
5604	Lost Treasures of the Maya	2019	All	0.0	0	0	0	0	1
5605	Awesome Animals	2013	All	0.0	0	0	0	0	1
5606	Tut's Treasures: Hidden Secrets	2018	All	0.0	0	0	0	0	1
5607	Paradise Islands	2017	All	0.0	0	0	0	0	1
5608	Wild Russia	2018	All	0.0	0	0	0	0	1
5609	Love & Vets	2017	All	0.0	0	0	0	0	1
5610	United States of Animals	2016	All	0.0	0	0	0	0	1

In [9]:

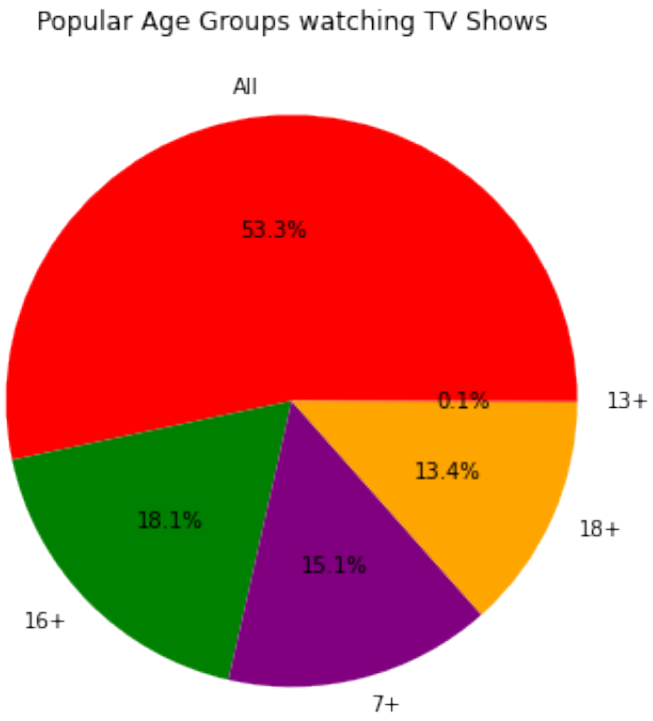
```
df['Age'].value_counts()
```

Out[9]:

```
All    2991
16+    1018
7+      848
18+     750
13+       4
Name: Age, dtype: int64
```

In [10]:

```
#Popular Age Rating

popular_age = df['Age'].value_counts()
popular_age = popular_age.reset_index()

popular_age = popular_age.rename(columns={'Age':'Count'})
popular_age = popular_age.rename(columns={'index':'Age'})

plt.figure(figsize = (6,10))   # fig size

colors = ["red", "green", "purple", "orange"]    # applying colors

plt.pie(popular_age['Count'], labels = popular_age['Age'], colors=colors, aut
plt.title("Popular Age Groups watching TV Shows")

plt.show()
```

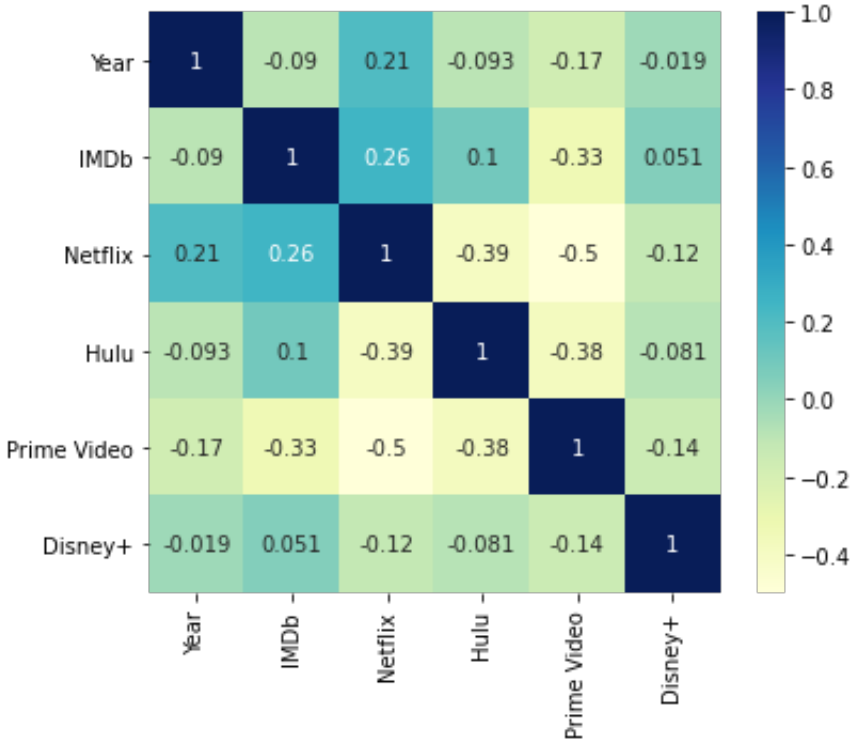


In [11]:
```
df.corr()   # finding corelation
```

Out[11]:

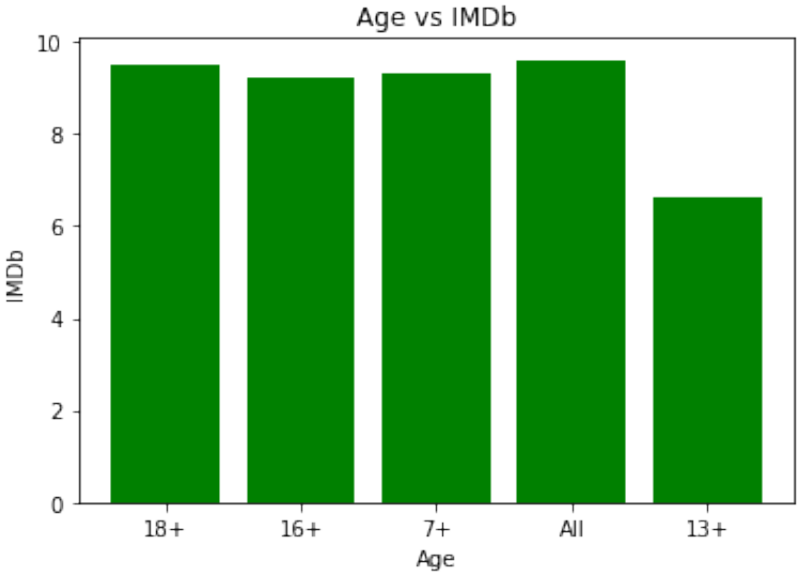
	Year	IMDb	Netflix	Hulu	Prime Video	Disney+
Year	1.000000	-0.090234	0.207759	-0.092723	-0.171060	-0.018914
IMDb	-0.090234	1.000000	0.255488	0.102850	-0.325745	0.051235
Netflix	0.207759	0.255488	1.000000	-0.392190	-0.500160	-0.119102
Hulu	-0.092723	0.102850	-0.392190	1.000000	-0.375221	-0.081313
Prime Video	-0.171060	-0.325745	-0.500160	-0.375221	1.000000	-0.143163
Disney+	-0.018914	0.051235	-0.119102	-0.081313	-0.143163	1.000000

In [12]:
```
# HeatMap

HeatMap = df.corr()
HeatMap_Fig = plt.figure(figsize = (6,5))
sns.heatmap(HeatMap, annot= True, cmap="YlGnBu")
plt.show()
```



In [13]:

```
# Bar Chart for Age Groups who see IMDb ratings before watching movie

x = df['Age']
y = df['IMDb']

plt.bar(x,y,color=['green'])

plt.title('Age vs IMDb')
plt.xlabel('Age')
plt.ylabel('IMDb')

plt.figure(figsize=(30,20))
plt.show()
```

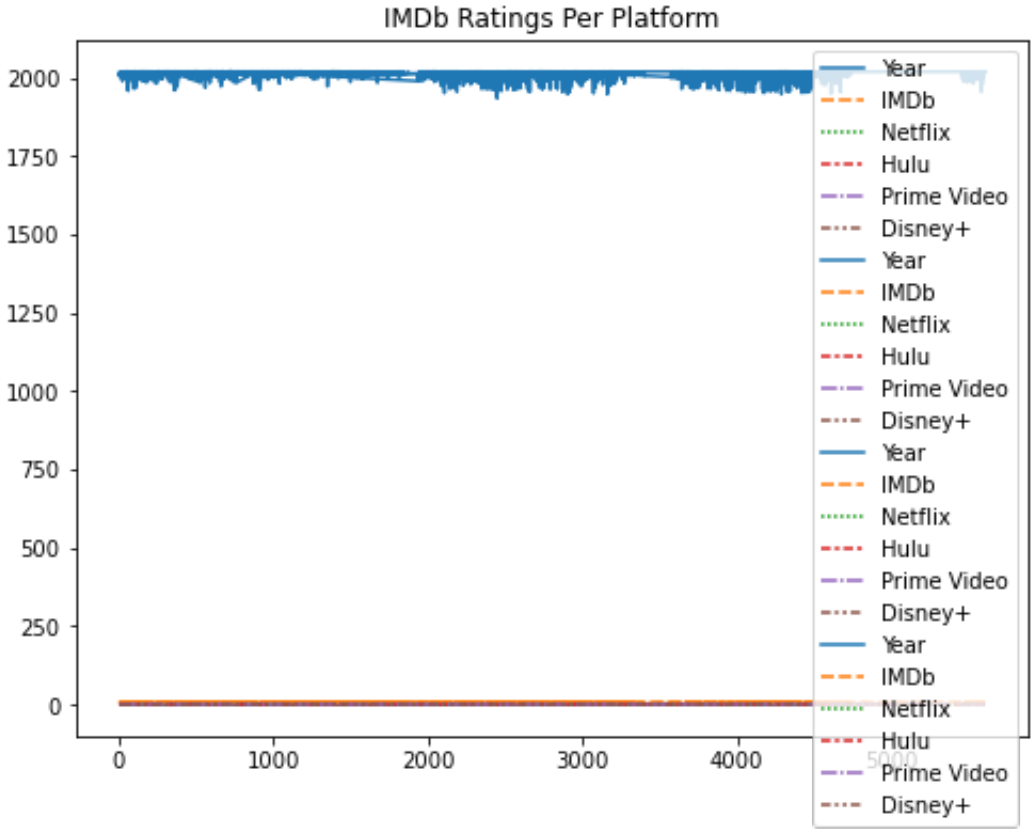



```
<Figure size 2160x1440 with 0 Axes>
```

In [14]:

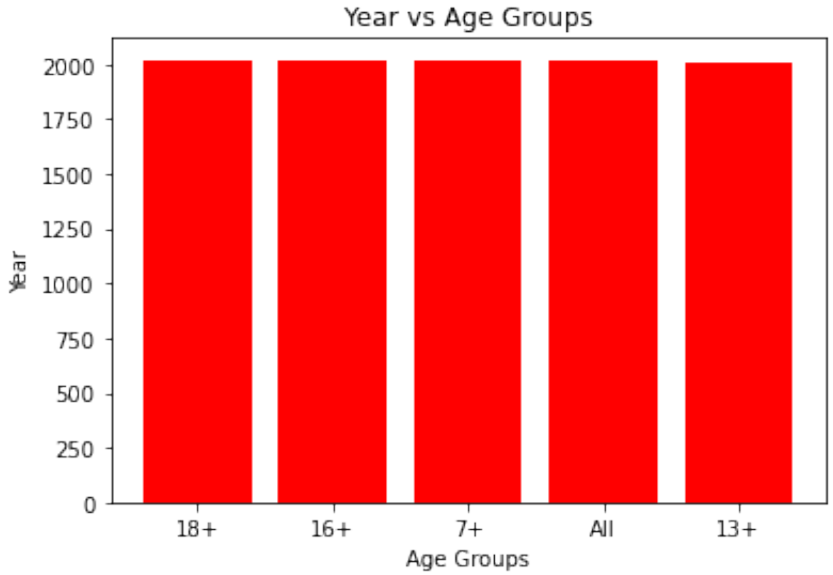
```
# IMDb rating per platform

H = df.loc[(df['Hulu'] > 0) ]          # loc for accessing columns
D = df.loc[(df['Disney+'] > 0) ]
P = df.loc[(df['Prime Video'] > 0)  ]
N = df.loc[(df['Netflix'] > 0)  ]

H2 = H.loc[H['IMDb'] > 0]
N2 = N.loc[N['IMDb'] > 0]
P2 = P.loc[P['IMDb'] > 0]
D2 = D.loc[D['IMDb'] > 0]



plt.figure(figsize=(8,6))               # fig size
plt.title('IMDb Ratings Per Platform')   # title

# line plot

sns.lineplot(data=H2)
sns.lineplot(data=N2)
sns.lineplot(data=P2)
sns.lineplot(data=D2)
```

Out[14]: <AxesSubplot:title={'center':'IMDb Ratings Per Platform'}>



In [18]:

```
#year vs age group

x = df['Age']
y = df['Year']
plt.bar(x,y)
plt.bar(x,y,color=['red'])
plt.title('Year vs Age Groups')
plt.xlabel('Age Groups')
plt.ylabel('Year')
plt.figure(figsize=(30,20))
plt.show()
```




```
<Figure size 2160x1440 with 0 Axes>
```

In [ ]: