Analyzing The Impact Of Social Media On Student Life

In [45]:
```
import pandas as pd
import numpy as np
import seaborn as sns

import matplotlib.pyplot as plt
```

In [29]:
```
df=pd.read_csv('Students Social Media Addiction.csv')
```

In [30]:
```
df=df[df['Most_Used_Platform']!='TikTok']
```

In [31]:
```
df.head()
```

Out[31]:

	Student_ID	Age	Gender	Academic_Level	Country	Avg_Daily_Usage_Hours	Most_Used
0	1	19	Female	Undergraduate	Bangladesh	5.2	
1	2	22	Male	Graduate	India	2.1	
3	4	18	Male	High School	UK	3.0	
4	5	21	Male	Graduate	Canada	4.5	
5	6	19	Female	Undergraduate	Australia	7.2	

In [32]:
```
df.dtypes
```

Out[32]:
```
Student_ID                        int64
Age                               int64
Gender                           object
Academic_Level                   object
Country                          object
Avg_Daily_Usage_Hours           float64
Most_Used_Platform               object
Affects_Academic_Performance     object
Sleep_Hours_Per_Night           float64
Mental_Health_Score               int64
Relationship_Status              object
Conflicts_Over_Social_Media       int64
Addicted_Score                    int64
dtype: object
```

In [33]:
```
df['Affects_Academic_Performance']=df['Affects_Academic_Performanc
e'].map({'Yes':1,'No':0})
```

In [34]:
```
df
```

Out[34]:

	Student_ID	Age	Gender	Academic_Level	Country	Avg_Daily_Usage_Hours	Most_Us
0	1	19	Female	Undergraduate	Bangladesh	5.2	
1	2	22	Male	Graduate	India	2.1	
3	4	18	Male	High School	UK	3.0	
4	5	21	Male	Graduate	Canada	4.5	
5	6	19	Female	Undergraduate	Australia	7.2	
6	7	23	Male	Graduate	Germany	1.5	
7	8	20	Female	Undergraduate	Brazil	5.8	
9	10	21	Female	Graduate	South Korea	3.3	
10	11	19	Male	Undergraduate	France	4.8	
12	13	22	Male	Graduate	Italy	2.8	
13	14	18	Female	High School	Mexico	6.5	
14	15	21	Male	Undergraduate	Russia	3.7	
16	17	24	Male	Graduate	Sweden	2.0	
17	18	19	Female	High School	Norway	5.0	
18	19	21	Male	Undergraduate	Denmark	3.5	
19	20	20	Female	Undergraduate	Netherlands	4.7	
21	22	23	Female	Graduate	Switzerland	2.5	
22	23	19	Male	Undergraduate	Austria	4.9	
24	25	22	Male	Graduate	Greece	3.2	
25	26	19	Female	High School	Ireland	6.1	
26	27	21	Male	Undergraduate	New Zealand	3.8	
28	29	24	Male	Graduate	Malaysia	2.2	
29	30	19	Female	High School	Thailand	5.9	
30	31	21	Male	Undergraduate	Vietnam	3.6	
31	32	20	Female	Undergraduate	Philippines	4.8	
33	34	23	Female	Graduate	Taiwan	2.6	
34	35	19	Male	Undergraduate	Hong Kong	4.7	
36	37	22	Male	Graduate	Israel	3.1	
37	38	19	Female	High School	UAE	6.2	
38	39	21	Male	Undergraduate	Egypt	3.9	
40	41	24	Male	Graduate	South Africa	2.3	
41	42	19	Female	High School	Nigeria	5.8	

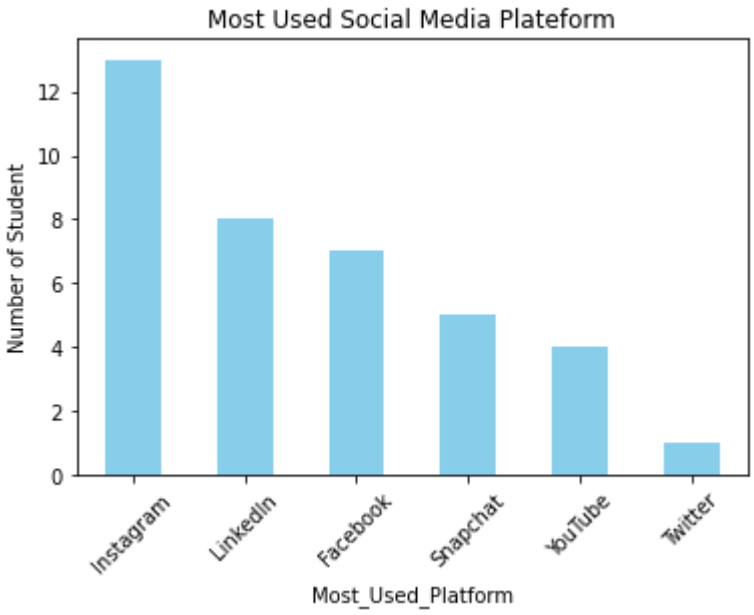
	Student_ID	Age	Gender	Academic_Level	Country	Avg_Daily_Usage_Hours	Most_Us
42	43	21	Male	Undergraduate	Kenya	3.7	
43	44	20	Female	Undergraduate	Ghana	4.6	
45	46	23	Female	Graduate	Chile	2.7	
46	47	19	Male	Undergraduate	Colombia	4.8	
48	49	22	Male	Graduate	Venezuela	3.3	
49	50	19	Female	High School	Ecuador	6.3	

In [35]:
```
df.describe()
```

Out[35]:

	Student_ID	Age	Avg_Daily_Usage_Hours	Affects_Academic_Performance	Sleep_
count	38.000000	38.000000	38.000000	38.000000	
mean	25.263158	20.684211	4.121053	0.473684	
std	14.766075	1.756921	1.458648	0.506009	
min	1.000000	18.000000	1.500000	0.000000	
25%	13.250000	19.000000	3.025000	0.000000	
50%	25.500000	21.000000	3.850000	0.000000	
75%	37.750000	22.000000	4.975000	1.000000	
max	50.000000	24.000000	7.200000	1.000000	

In [36]:
```
df['Most_Used_Platform'].value_counts().plot(kind='bar',color="skyblue")
plt.title('Most Used Social Media Plateform')
plt.ylabel("Number of Student")
plt.xticks(rotation=45)
plt.show()
```



In [37]:
```
df.groupby('Gender')['Avg_Daily_Usage_Hours'].mean()
```

Out[37]:
```
Gender
Female    5.011765
Male      3.400000
Name: Avg_Daily_Usage_Hours, dtype: float64
```

In [38]:
```
df['Most_Used_Platform'].value_counts()
```

Out[38]:
```
Most_Used_Platform
Instagram    13
LinkedIn      8
Facebook      7
Snapchat      5
YouTube       4
Twitter       1
Name: count, dtype: int64
```

In [39]:
```
df
```

Out[39]:

	Student_ID	Age	Gender	Academic_Level	Country	Avg_Daily_Usage_Hours	Most_Us
0	1	19	Female	Undergraduate	Bangladesh	5.2	
1	2	22	Male	Graduate	India	2.1	
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19	20	20	Female	Undergraduate	Netherlands	4.7	
21	22	23	Female	Graduate	Switzerland	2.5	
22	23	19	Male	Undergraduate	Austria	4.9	
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25	26	19	Female	High School	Ireland	6.1	
26	27	21	Male	Undergraduate	New Zealand	3.8	
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29	30	19	Female	High School	Thailand	5.9	
30	31	21	Male	Undergraduate	Vietnam	3.6	
31	32	20	Female	Undergraduate	Philippines	4.8	
33	34	23	Female	Graduate	Taiwan	2.6	
34	35	19	Male	Undergraduate	Hong Kong	4.7	
36	37	22	Male	Graduate	Israel	3.1	
37	38	19	Female	High School	UAE	6.2	
38	39	21	Male	Undergraduate	Egypt	3.9	
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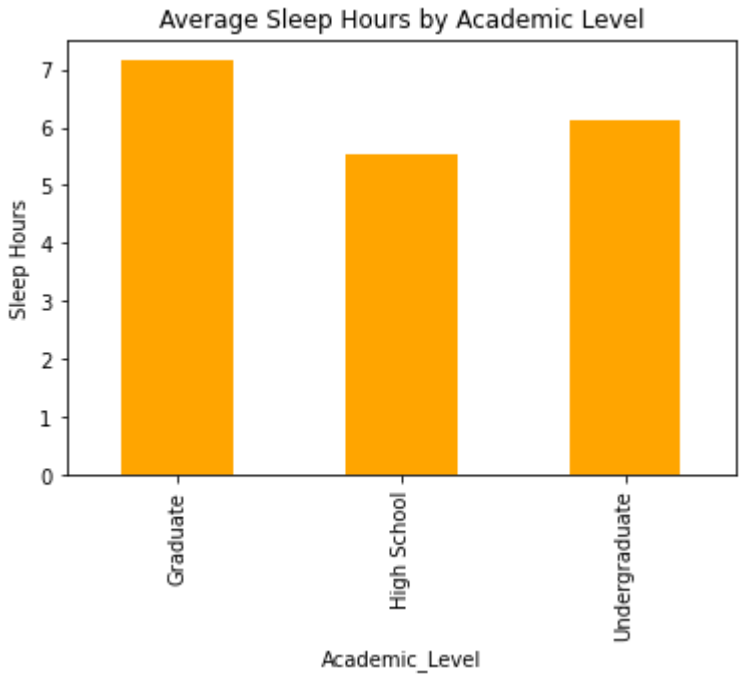
48	49	22	Male	Graduate	Venezuela	3.3	
49	50	19	Female	High School	Ecuador	6.3	

In [40]:
```
df.groupby('Academic_Level')['Sleep_Hours_Per_Night'].mean().plot(kind="bar",color="orange")
plt.title("Average Sleep Hours by Academic Level")
plt.ylabel("Sleep Hours")
plt.show()
```



In [41]:
```
df.groupby('Most_Used_Platform')['Mental_Health_Score'].mean().sort_values(ascending=False)
```

Out[41]:
```
Most_Used_Platform
LinkedIn     8.125000
Twitter      8.000000
YouTube      7.000000
Facebook     6.857143
Snapchat     5.800000
Instagram    5.384615
Name: Mental_Health_Score, dtype: float64
```

In [42]:
```
df.groupby('Relationship_Status')['Conflicts_Over_Social_Media'].mean()
```

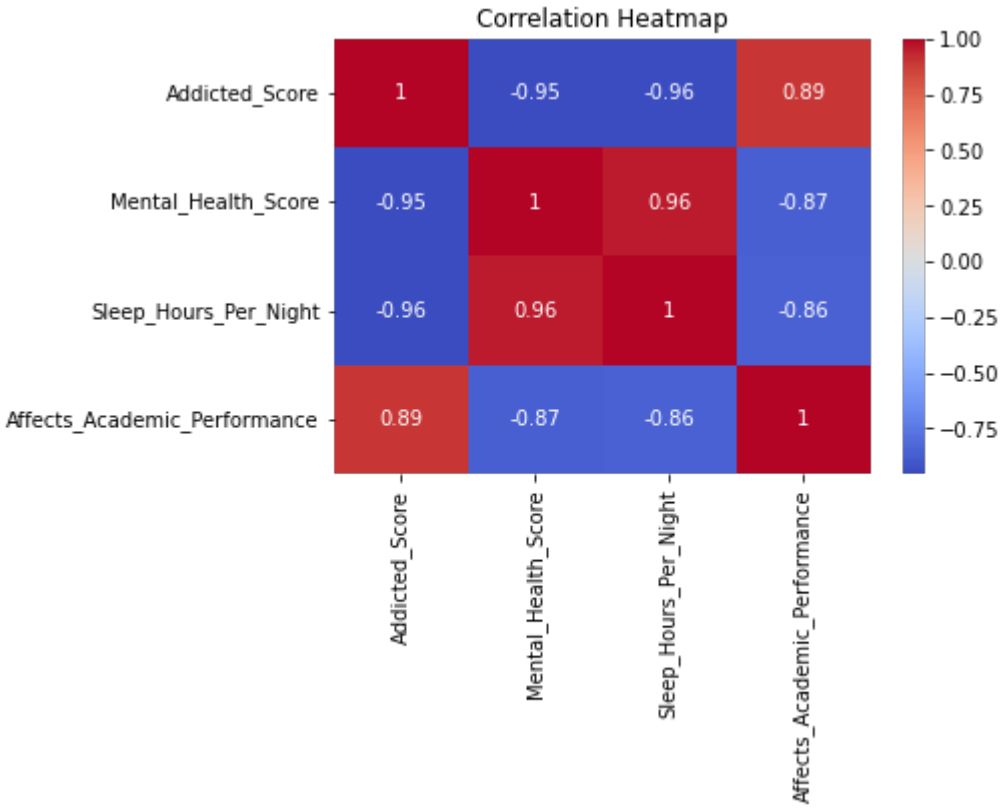
Out[42]:
```
Relationship_Status
Complicated        3.300000
In Relationship    2.333333
Single             1.000000
Name: Conflicts_Over_Social_Media, dtype: float64
```

In [43]:
```
df.groupby('Gender')['Addicted_Score'].mean().sort_values(ascending=False)
```

Out[43]:
```
Gender
Female    7.176471
Male      4.952381
Name: Addicted_Score, dtype: float64
```

In [51]:
```
sns.heatmap(df[['Addicted_Score','Mental_Health_Score','Sleep_Hours_Per_Night',
'Affects_Academic_Performance']].corr(),annot=True,cmap='coolwarm')
plt.title('Correlation Heatmap')
plt.show
```

Out[51]:
```
<function matplotlib.pyplot.show(close=None, block=None)>
```



In [ ]: