


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

df= pd.read_csv("accidents.csv")

<ipython-input-14-b8c6af139505>:1: DtypeWarning: Columns (30,31,32,33,34,35,36,37,38,39,40,41,42) have mixed types. Specify dtype of
df= pd.read_csv("accidents.csv")
```

```
df.head(5)
```



	ID	Severity	Start_Time	End_Time	Start_Lat	Start_Lng	End_Lat	End_Lng	Distance(mi)	Description	...	Roundabout	Stat
0	A-1	2	2019-05-21 08:29:55	2019-05-21 09:29:40	34.808868	-82.269157	34.808868	-82.269157	0.0	Accident on Tanner Rd at Pennbrooke Ln.	...	False	F
1	A-2	2	2019-10-07 17:43:09	2019-10-07 19:42:50	35.090080	-80.745560	35.090080	-80.745560	0.0	Accident on Houston Branch Rd at Providence Br...	...	False	F
2	A-3	2	2020-12-13 21:53:00	2020-12-13 22:44:00	37.145730	-121.985052	37.165850	-121.988062	1.4	Stationary traffic on CA-17 from Summit Rd (CA...	...	False	F
3	A-4	2	2018-04-17 16:51:23	2018-04-17 17:50:46	39.110390	-119.773781	39.110390	-119.773781	0.0	Accident on US-395 Southbound at Topsy Ln.	...	False	F
4	A-5	3	2016-08-31 17:40:49	2016-08-31 18:10:49	26.102942	-80.265091	26.102942	-80.265091	0.0	Accident on I-595 Westbound at Exit 4 / Pine I...	...	False	F

5 rows × 47 columns

```
selected_columns = ['ID', 'Severity', 'Start_Time', 'End_Time','Source']

important_columns = ['Severity', 'Start_Time']
df.dropna(subset=important_columns, inplace=True)

df['Start_Time'] = pd.to_datetime(df['Start_Time'], errors='coerce')

df.dropna(subset=['Start_Time'], inplace=True)

df['Hour'] = df['Start_Time'].dt.hour

hourly_accidents = df.groupby('Hour').size()

weather_accidents = df.groupby('Weather_Condition').size().sort_values(ascending=False).head(10)

city_accidents = df.groupby('City').size().sort_values(ascending=False).head(10)

plt.figure(figsize=(10, 6))
sns.barplot(x=hourly_accidents.index, y=hourly_accidents.values, color='skyblue')
plt.title('Hourly Accident Counts')
plt.xlabel('Hour of Day')
plt.ylabel('Number of Accidents')
plt.xticks(rotation=45)
plt.grid(axis='y')
plt.show()
```

