Import The Necessary Libraries

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

```
from google.colab import drive
drive.mount('/content/drive')
```

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

```
data=pd.read_csv('/content/drive/MyDrive/Uber Drives - .csv')
data.head()
```

	START_DATE*	END_DATE*	CATEGORY*	START*	STOP*	MILES*	PURPOSE*
0	1/1/2016 21:11	1/1/2016 21:17	Business	Fort Pierce	Fort Pierce	5.1	Meal/Entertain
1	1/2/2016 1:25	1/2/2016 1:37	Business	Fort Pierce	Fort Pierce	5.0	NaN
2	1/2/2016 20:25	1/2/2016 20:38	Business	Fort Pierce	Fort Pierce	4.8	Errand/Supplies
3	1/5/2016 17:31	1/5/2016 17:45	Business	Fort Pierce	Fort Pierce	4.7	Meeting
4	1/6/2016 14:42	1/6/2016 15:49	Business	Fort Pierce	West Palm Beach	63.7	Customer Visit

```
data.isnull().any()
```

```
START_DATE*    False
END_DATE*       True
CATEGORY*       True
START*          True
STOP*           True
MILES*         False
PURPOSE*        True
dtype: bool
```

```
data.isnull().sum()
```

```
START_DATE*      0
END_DATE*        1
CATEGORY*        1
START*           1
STOP*            1
MILES*           0
PURPOSE*       503
dtype: int64
```

```
data=data.dropna()
```

```
data.isnull().sum()
```

```
START_DATE*    0
END_DATE*      0
CATEGORY*      0
START*         0
STOP*          0
MILES*         0
PURPOSE*       0
dtype: int64
```

```
data['START_DATE*'] = pd.to_datetime(data['START_DATE*'], format="%m/%d/%Y %H:%M")
data['END_DATE*'] = pd.to_datetime(data['END_DATE*'], format="%m/%d/%Y %H:%M")
```

```
hour=[]
day=[]
dayofweek=[]
month=[]
weekday=[]
for x in data['START_DATE*']:
    hour.append(x.hour)
    day.append(x.day)
    dayofweek.append(x.dayofweek)
    month.append(x.month)
    weekday.append(calendar.day_name[dayofweek[-1]])
data['HOUR']=hour
data['DAY']=day
data['DAY_OF_WEEK']=dayofweek
data['MONTH']=month
data['WEEKDAY']=weekday
```

```
data.head()
```

	START_DATE*	END_DATE*	CATEGORY*	START*	STOP*	MILES*	PURPOSE*	HOUR	DAY	DAY_OF_WEEK	MONTH	WEEKDAY
0	2016-01-01 21:11:00	2016-01-01 21:17:00	Business	Fort Pierce	Fort Pierce	5.1	Meal/Entertain	21	1	4	1	Friday
2	2016-01-02 20:25:00	2016-01-02 20:38:00	Business	Fort Pierce	Fort Pierce	4.8	Errand/Supplies	20	2	5	1	Saturday
3	2016-01-05 17:31:00	2016-01-05 17:45:00	Business	Fort Pierce	Fort Pierce	4.7	Meeting	17	5	1	1	Tuesday
4	2016-01-06 14:42:00	2016-01-06 15:49:00	Business	Fort Pierce	West Palm Beach	63.7	Customer Visit	14	6	2	1	Wednesday

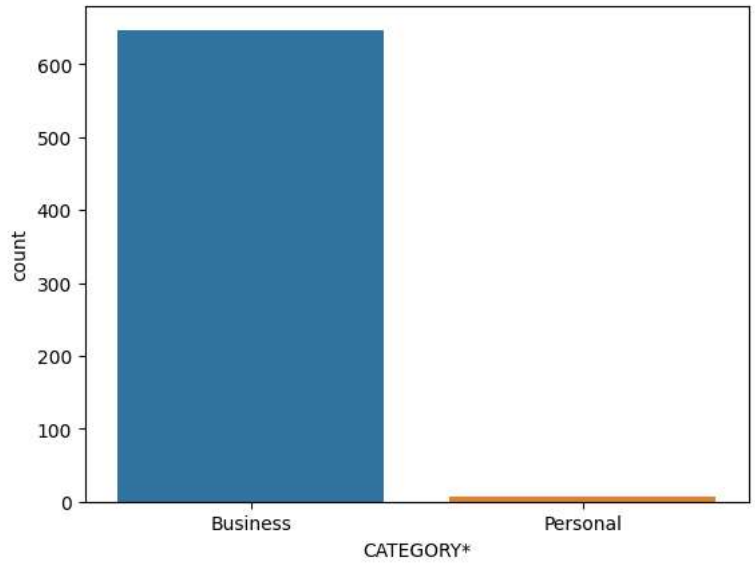
Categories We Have

```
data['CATEGORY*'].value_counts()
```

```
Business    647
Personal      6
Name: CATEGORY*, dtype: int64
```

```
sns.countplot(x='CATEGORY*',data=data)
```

```
<Axes: xlabel='CATEGORY*', ylabel='count'>
```

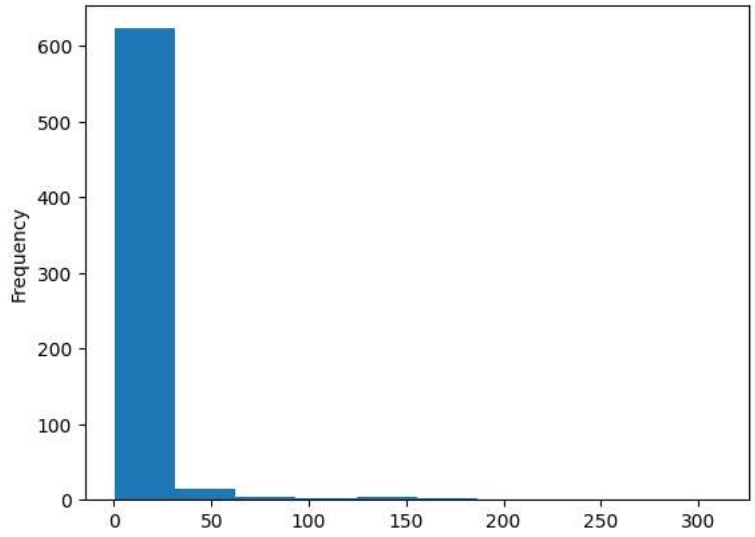


We have large number of business rides caegory as against very few personal rides.

How long do people travel with Uber?

```
data['MILES*'].plot.hist()
```

```
<Axes: ylabel='Frequency'>
```

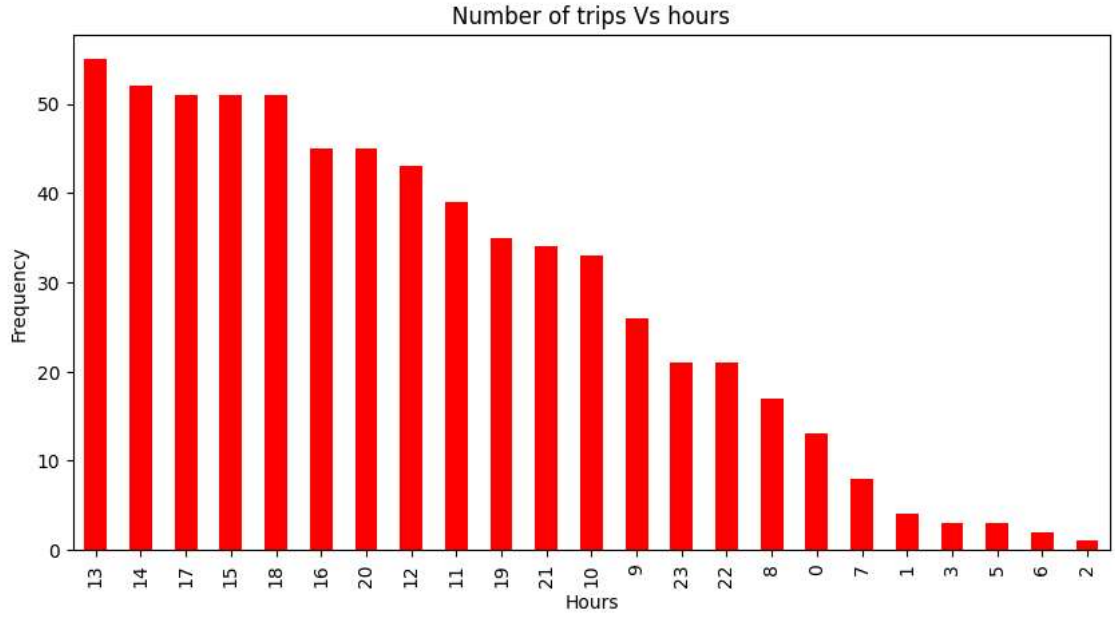


mostly people travel in a short mile with Uber.

What Hour Do Most People Take Uber To Their Destination?

```
hours = data['START_DATE*'].dt.hour.value_counts()
hours.plot(kind='bar',color='red',figsize=(10,5))
plt.xlabel('Hours')
plt.ylabel('Frequency')
plt.title('Number of trips Vs hours')
```

```
Text(0.5, 1.0, 'Number of trips Vs hours')
```

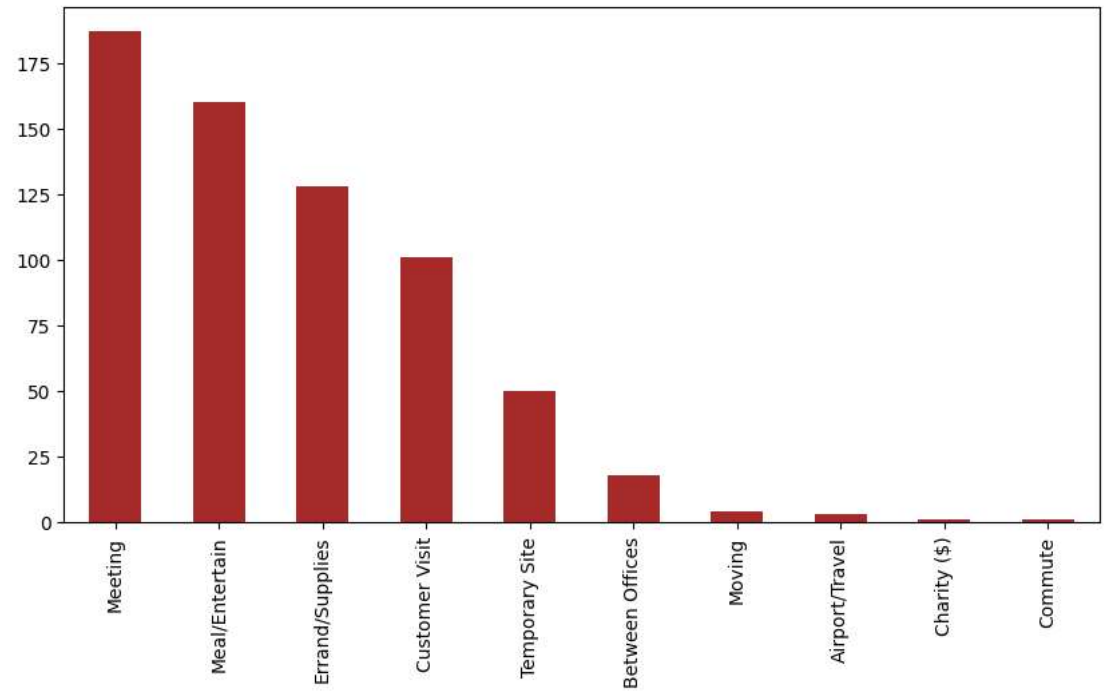


As we can see most people take Uber to their destination around the 13th hour(1pm) and the least hour is 2 am.

Check The Purpose Of Trips

```
data['PURPOSE*'].value_counts().plot(kind='bar',figsize=(10,5),color='brown')
```

```
<Axes: >
```

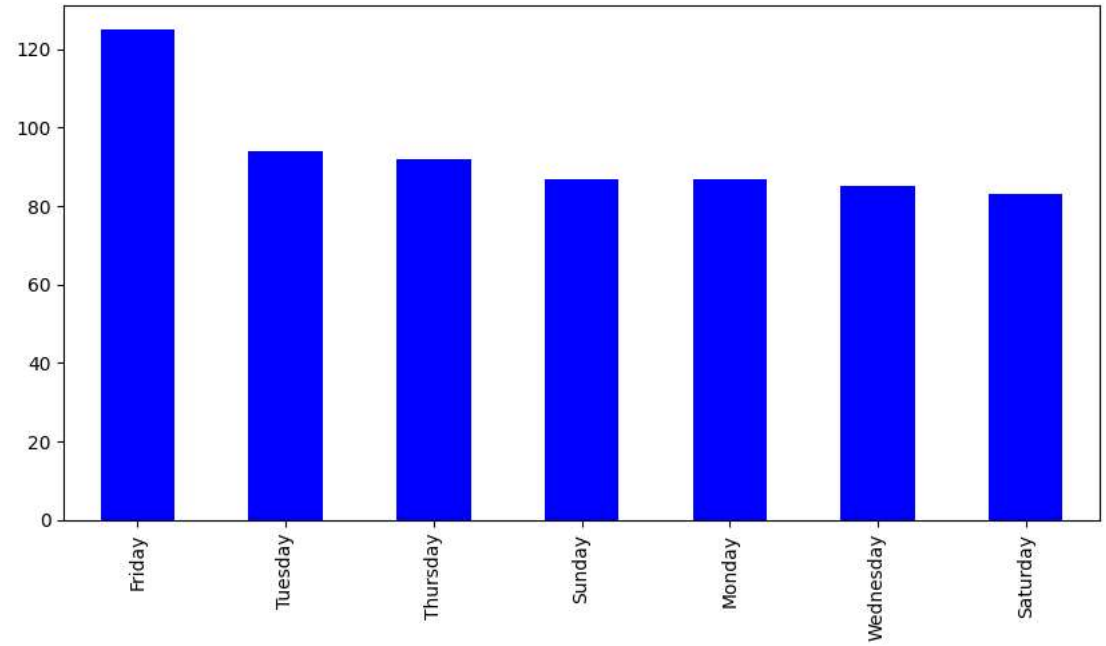


We can notice that mostly the purpose of the trip is meeting and meal/entertain.

Which Day Has The Highest Number Of Trips

```
data['WEEKDAY'].value_counts().plot(kind='bar',figsize=(10,5),color='blue')
```

```
<Axes: >
```

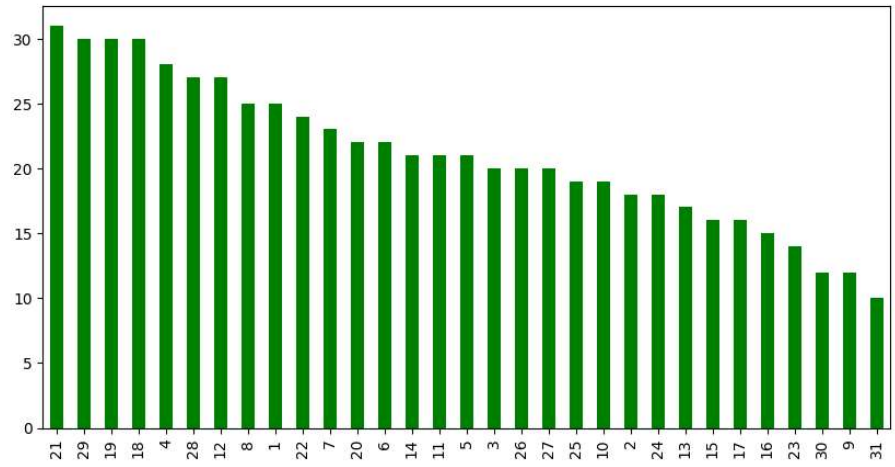


So Friday has the highest number of Trips.

What Are The Number Of Trips Per Each Day?

```
data['DAY'].value_counts().plot(kind='bar',figsize=(10,5),color='green')
```

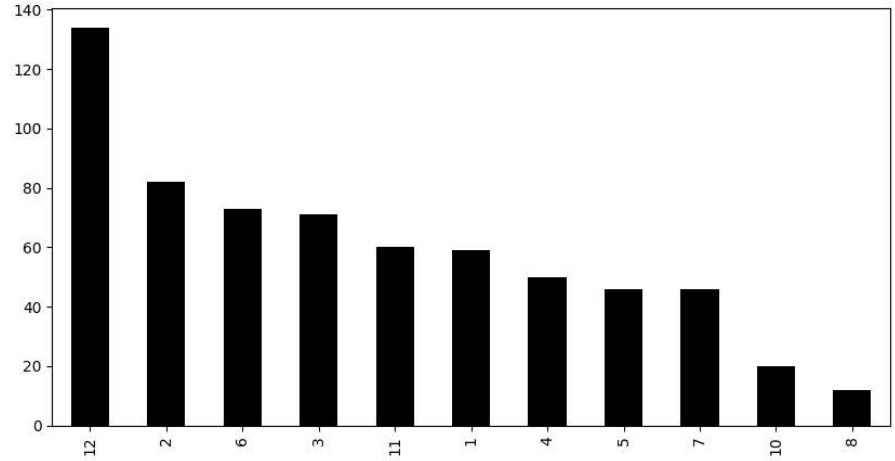
```
<Axes: >
```



What Are The Trips In The Month

```
data['MONTH'].value_counts().plot(kind='bar',figsize=(10,5),color='black')
```

```
<Axes: >
```

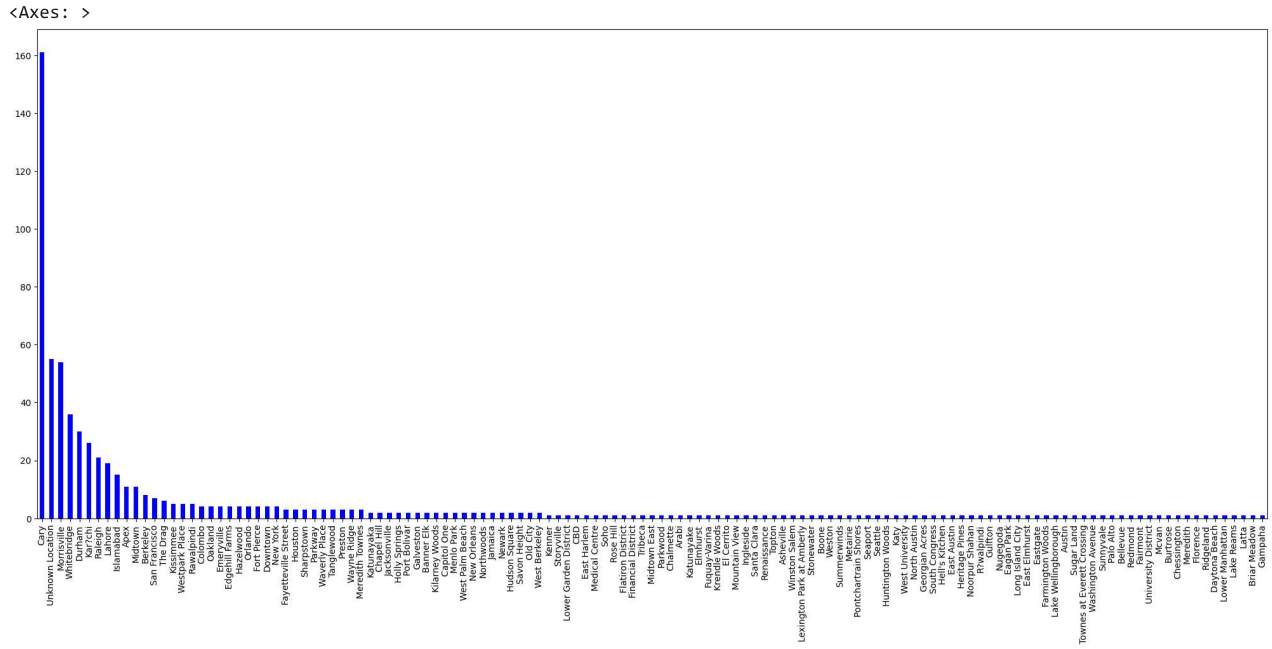


We can see that December(12) has the most trips.

The starting points of trips. Where Do People Start Boarding Their Trip From Most?

```
data['START*'].value_counts().plot(kind='bar',figsize=(25,10),color='blue')
```

```
<Axes: >
```



Colab paid products - Cancel contracts here

✓ 3s completed at 17:46