In [5]:

```
#loading the neccessary libraries for analysis and visualization
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
%matplotlib inline
import seaborn as sns
```

In [6]:

```
df = pd.read_csv('C:\\Users\\DELL\\Downloads\\twitter_archive_master1.csv')
df.head()
```

Out[6]:

	tweet_id	in_reply_to_status_id	in_reply_to_user_id	timestamp	text	retweeted_status_id	retwe
0	892420643555336193	NaN	NaN	2017-08-01 16:23:56	This is Phineas. He's a mystical boy. Only eve...	NaN	
1	892177421306343426	NaN	NaN	2017-08-01 00:17:27	This is Tilly. She's just checking pup on you....	NaN	
2	891815181378084864	NaN	NaN	2017-07-31 00:18:03	This is Archie. He is a rare Norwegian Pouncin...	NaN	
3	891689557279858688	NaN	NaN	2017-07-30 15:58:51	This is Darla. She commenced a snooze mid meal...	NaN	
4	891327558926688256	NaN	NaN	2017-07-29 16:00:24	This is Franklin. He would like you to stop ca...	NaN	

5 rows × 26 columns

Research questions

Before we encounter the questions, there are some limitations to our dataset:

```
-  The algorithim that has been used to generate names for our dataset may impact
our
   analysis, since some of the dogs do have the names in their tweets and it has
not
   correctly named them. Also some of the tweets are from two dogs, but it has only
   picked one dog name.
```

we need to answer the following questions from our dataset:

```
1. Which are the most common dog names in our dataset?
2. a. Which dog stage is most retweed on average?
   b.Does top retweed dog stages happen to be most liked?
3. Do dogs that happen to have high ratings happen to be most liked?
```

1 Which are the most common dog names?

since our datasets contains unnamed dogs we need to remove them, to remain with dogs that have only names.

In [7]:

```
df_name = df[df["name"] != "Unnamed"]
```

creating data for most common dogs by taking the top 15 dogs in our dataset

In [8]:

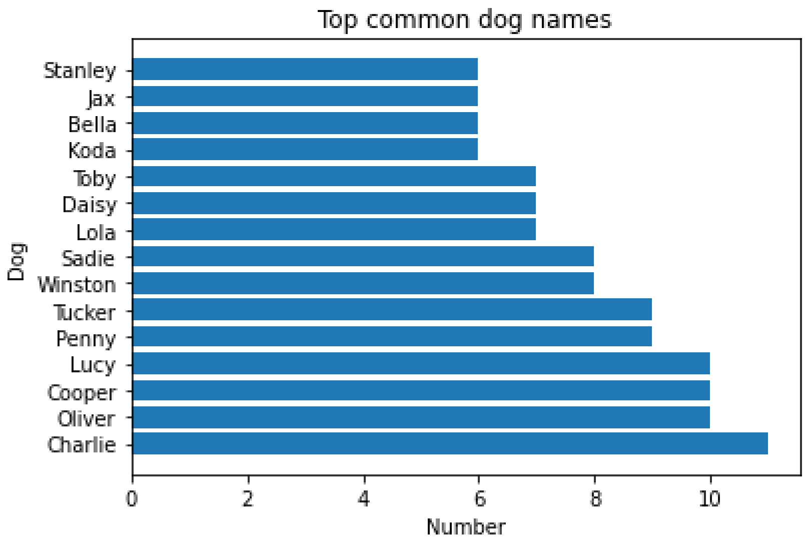
```
common = df_name.name.value_counts().head(15)
common
```

Out[8]:

```
Charlie     11
Oliver      10
Cooper      10
Lucy        10
Penny        9
Tucker       9
Winston      8
Sadie        8
Lola         7
Daisy        7
Toby         7
Koda         6
Bella        6
Jax          6
Stanley      6
Name: name, dtype: int64
```

In [9]:

```
figsize=(16,16)
plt.barh(common.index,common)
plt.title('Top common dog names')
plt.xlabel('Number')
plt.ylabel('Dog');
```



Charlie can be seen as to be the most common name followed by Oliver, Cooper and Lucy.

2. a. Which dog stage is most retweed on average?

b.Does top retweed dog stages happen to be most liked

Since our dataset contains ungrouped dogs, we need to get rid of ungrouped dogs from our analysis.

In [10]:

```
df_stage = df[df["stage"] != "ungrouped"]
```

In [11]:

```
retweet = df_stage.groupby('stage')[['favorite_count','retweet_count']].mean()#['retweet_
retweet.reset_index(inplace=True)
```

In [12]:

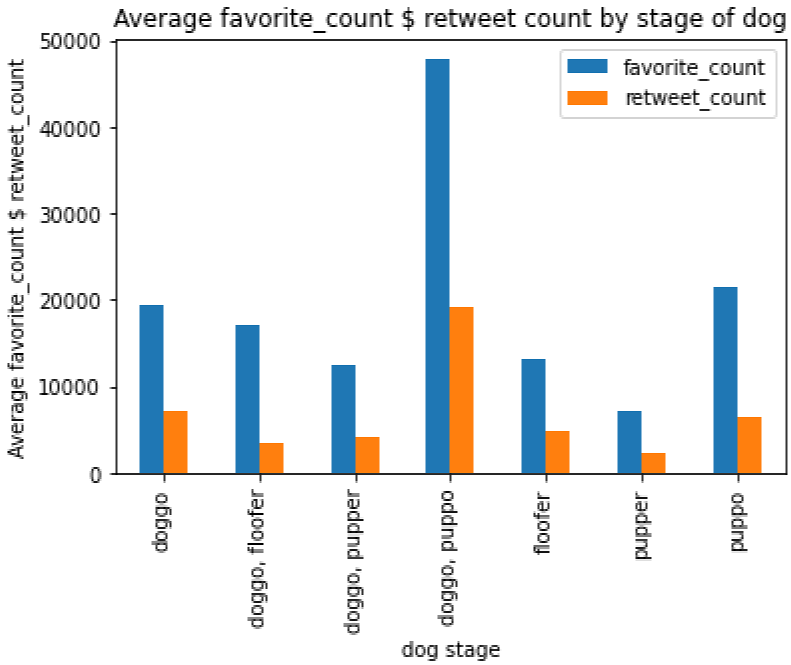
```
retweet
```

Out[12]:

	stage	favorite_count	retweet_count
0	doggo	19356.380952	7125.698413
1	doggo, floofer	17169.000000	3433.000000
2	doggo, pupper	12533.111111	4083.444444
3	doggo, puppo	47844.000000	19196.000000
4	floofer	13206.000000	4968.714286
5	pupper	7197.738916	2363.581281
6	puppo	21582.090909	6473.954545

In [13]:

```
locations = [1, 2, 3, 4]
retweet.plot(x="stage", y=["favorite_count", 'retweet_count'], kind='bar')
plt.title('Average favorite_count $ retweet count by stage of dog')
plt.xlabel('dog stage')
plt.ylabel('Average favorite_count $ retweet_count');
```



It can be noted that dog stages with higher retweet counts also happen to be the most liked dogs.

3. Do dogs that happen to have high ratings most liked?

In [14]:

```
bin_values = [0.0, 10.0, 11.0, 12.0, 17.0]
```

```
bin_names =  ['lowly_rated', 'average_rated', 'top_rated', 'highly_rated']
```

In [15]:

```
#create popular level columns
df['rating_levels'] = pd.cut(df['rating_numerator'], bin_values, labels=bin_names)
df.sample(3)
```

Out[15]:

	tweet_id	in_reply_to_status_id	in_reply_to_user_id	timestamp	text	retweeted_status_id	re
870	727524757080539137	NaN	NaN	2016-05-03 15:46:33	This pupper had to undergo emergency haircut s...	NaN	
808	739544079319588864	NaN	NaN	2016-06-05 19:47:03	This... is a Tyrannosaurus rex. We only rate d...	NaN	
625	764857477905154048	NaN	NaN	2016-08-14 16:13:27	This is Aubie. He has paws for days. Nibbling ...	NaN	

3 rows × 27 columns

In [16]:

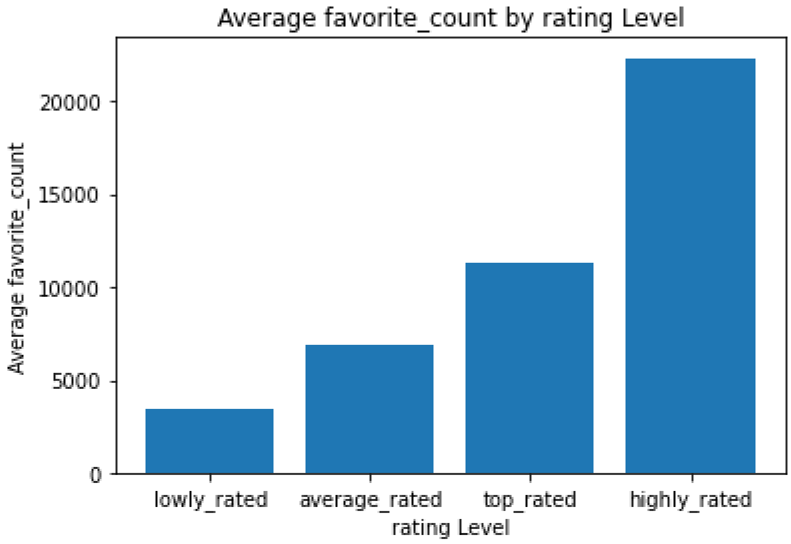
```
df_liked = df.groupby('rating_levels').mean().favorite_count
df_liked
```

Out[16]:

```
rating_levels
lowly_rated       3469.691937
average_rated     6883.035354
top_rated        11266.313333
highly_rated     22322.215873
Name: favorite_count, dtype: float64
```

In [17]:

```
locations = [1, 2, 3, 4]
plt.bar(locations, df_liked, tick_label=df_liked.index)
plt.title('Average favorite_count by rating Level')
plt.xlabel('rating Level')
plt.ylabel('Average favorite_count');
```



it can be observed from our visualization that dogs that are highly rated happen to be most liked.

CONCLUSIONS

From our data to answer the research questions we did exclude large amount of data from our dataset which had no names and groups. This remaining data may not well represent the entire dataset.

Insights

1. Which are the most common dog names in our dataset?

- The most common dogs in our dataset are: Charlie, Oliver, Cooper and Lucy . Charlie appears 11 times in our datasets then Oliver, Cooper and Lucy tie at second with 10 number of apperrances.

1. a. Which dog stage is most retweed on average?

- The most retweed dog stage is doggo, puppo then followed by doggo and then puppo. The most retweeted beats the second by almost three times b.Does top retweed dog stages happen to be most liked?
- It is generally clear that the most retweed dog stages also happen to be most liked. doggo, puppo leads in both.

1. Do dogs that happen to have high ratings happen to be most liked?

- There is a general trend of increasing favorite_count from lowly rated dogs to highly rated dogs. This indicates dogs that have high ratings, happen also to be most liked among our dog dataset.