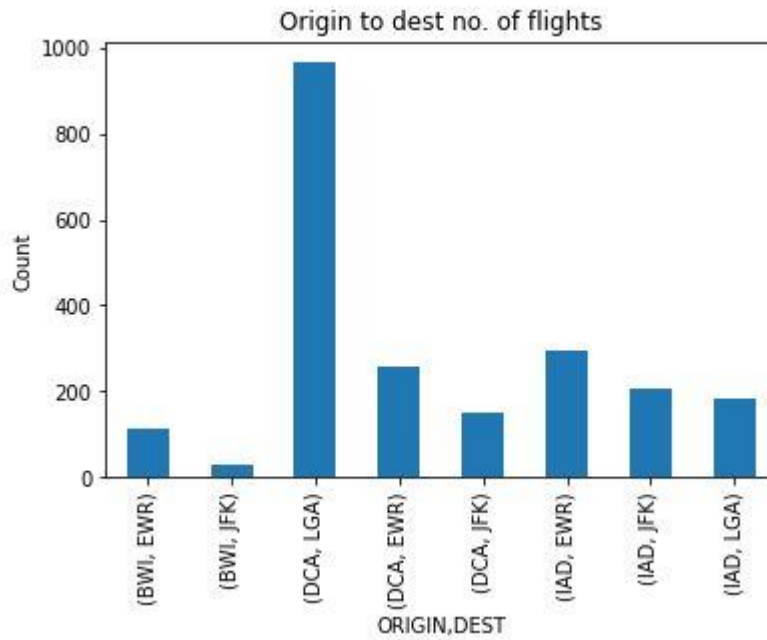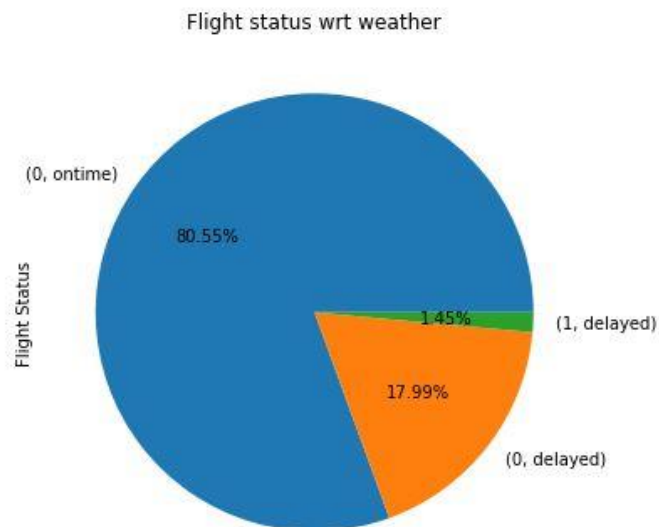Name: Prabal Gautam

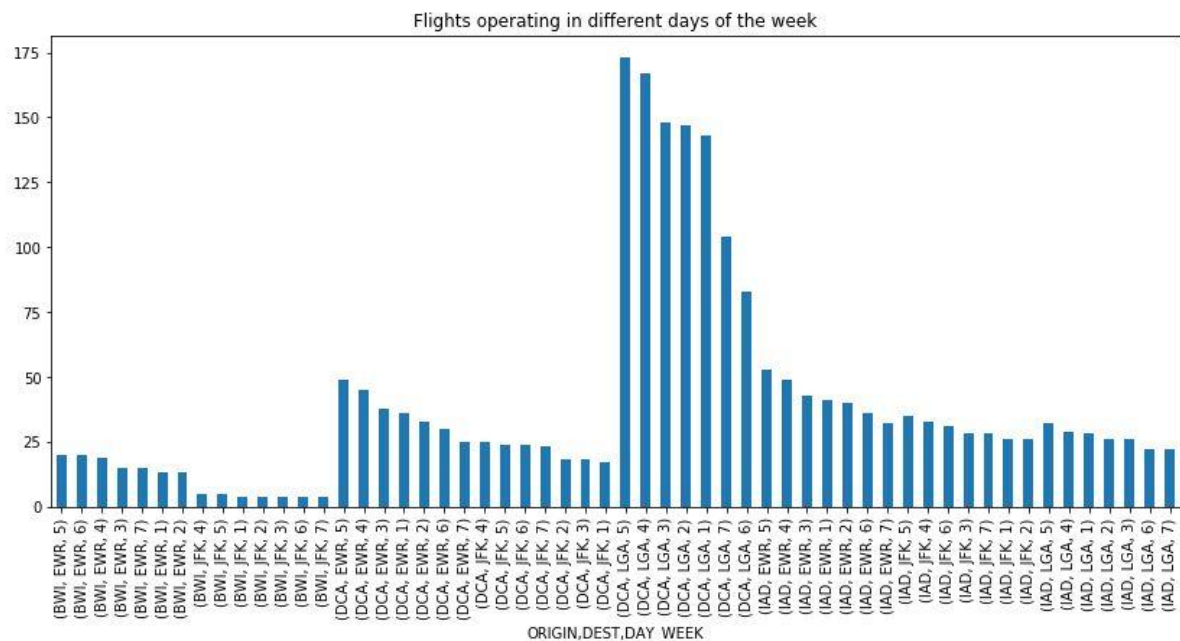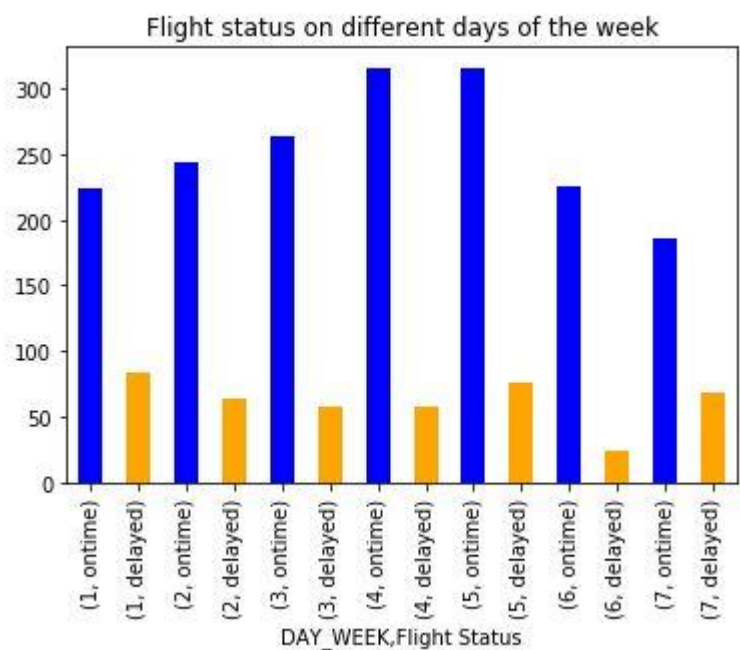Roll no.:18B030017

ASSIGNMENT – 2

1-

This shows the no. of flights that travels between the different airport of US from this we get to know that the busiest route is from DCA to EWR

The above figure shows the flight status wrt weather conditions the 1 marked shows that there was an weather related delays it helps us to analyze that there are some flights which got delayed no matter the weather conditions were worse or not.

This fig shows the flight operating on the different days of the week between different routes, it clearly shows that the maximum no. of flight travelling occurs at Friday and least no. occurs during Sundays the peak delay of fights no doubt will occur on Fridays.

It shows the flight status on different days of the week and it clearly shows that the maximum no. of flights take off during Fridays and min no. of flight take off accours during Sundays.

2- Done in the code.

3- From the above machine learning model we get to know that if all the features were to be used for predicting the model would still work but it will be slow and biased.
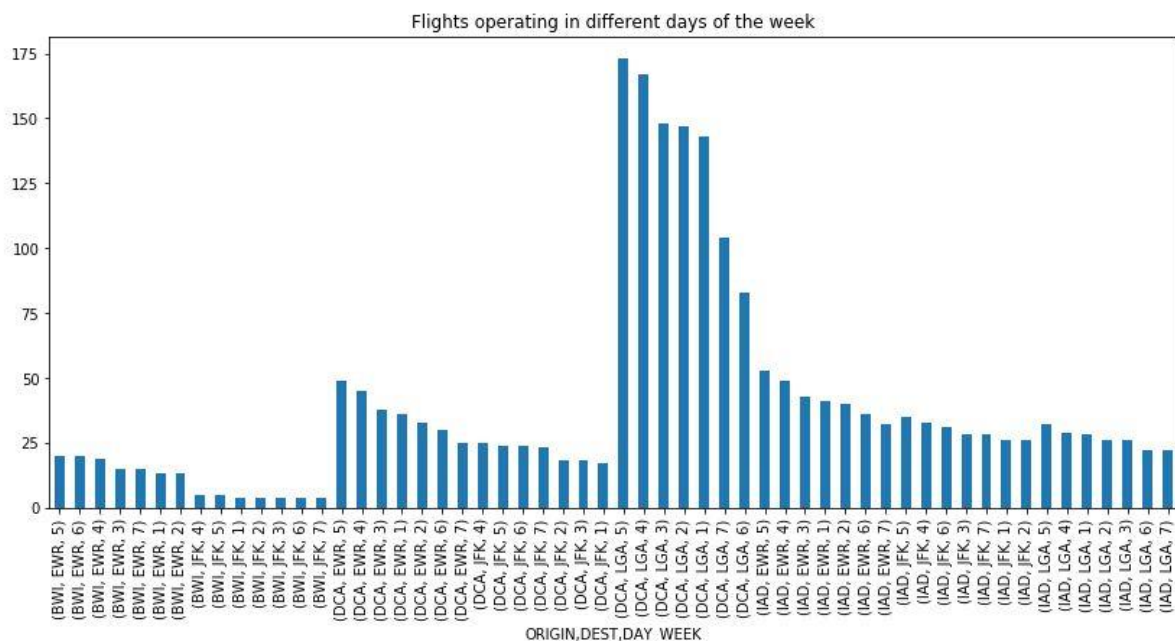
From the above model we can get the accuracy around 83% which is quite decent but the model is over biased due to the fact that it will not be loosing the accuracy if feature selection is done.

If we were to remove a few features like the TAIL_NUM which does not contribute much to our predicting but it bias the model very much as we are training for each and every tail no. and that is over biasing it.

4- We need to remove the features like TAIL_NUM, weather, DEP_DELAY, DAY_WEEK and we does not loose any accuracy so better to drop these features to reduce the dimensionality of our feature matrix.

5- did in the code

6-

According to the above bar plot the day 4 is the best.

BONUS QUES

1- a) ULTRON

   b) VISION

2- The **Data processing inequality** is an information theoretic concept which states that the information content of a signal cannot be increased via a local physical operation. This can be expressed concisely as 'post-processing cannot increase information.

3- The Rule of Two

4- C-3P0, R2-D2

5- **Cards Against Humanity** plays a creative prank on **Black Friday** shoppers every year on the day after Thanksgiving. Their stunt is always creative and surprising, making us all wish we could be so inventive.