ALGORITHMS THAT GOVERNS THE WORKING OF THE SYSTEM

Let the machine learning model makes a prediction (no. of patient who will not appear on the appointment date) = **n_1**

And, let the average time taken by per patient be **t_avg,**

And the waiting time for per patient be **R_wt,**

Total time reduced will be:

R_wt = R_wt – n_1*t_avg

Where **n1*t_avg** is total waiting time that will be reduced (hence we subtracted from original time allotted per patient)

Now, if the predicted number will be **n_1** will be more than actual number (actual number means the number of patients who actually didn't appeared)

Let the actual number be **n_2**,

Conditions:

1: if **n_1>n_2**:

Then reduced time will be **R_wt = R_wt – n1*t_avg + (n_1-n_2) *t_avg**

= R_wt – n_2*t_avg

2: if **n_1<n_2**:

Then reduced time will be **R_wt = R_wt – n_1*t_avg + (n_2 - n_1) *t_avg**

= R_wt – 2*n_1*t_avg + n_2*t_avg

3: Else:

R_wt = R_wt – n_1*t_avg