```
####Data Cleaning is complete and now we can start with objective 1 &
Objective 2
#Objective 1:
#Considering current trend of COVID-19 cases in Malaysia, I want to determine
if Malaysia could achieve 14 days average of below 1000 cases/day within the
next 3 months(Cumulative count of new cases over 14 consecutive days should
be less than 14000).
import packages warnings, itertools, numpy, matplotlib, pandas,statsmodels,
pmdarima

Convert Column 'date' to DataTime format using Pandas

index daraframe by column date.

extract columns 'date' and 'new_cases' in dataframe "df_objective1"

df_objective1.plot(Trend,Seasonality, and Noise graph to analyse the data)
divide df_objective1 in ratio of 70:30 in train_df_objective1 and
test_df_objective1 dataframe

from library pylab import package rcParams

using train_df_objective1 create a decomposition graph
plot the graph.
and show the graph

if(for train_df_objective1 Autocorrelation function Function(ACF)  is not
Stationary):
    use differencing method
    Verify Augmented Dickey-Fuller (ADF) for trend
    Verify Partial Autocorrelation function (PACF) for seasonality
    if(P value less than or = 0.05):
        Plot Seasonality for lag of 14 days
        Plot graph Partial Autocorrelation function (PACF)
        Plot graph Autocorrelation function Function(ACF)
        Extract value of Probable Autoregression (AR) and Probable Moving
Average(MA)
        Extract value of Seasonal Autoregression (AR) and Seasonal Moving
Average(MA)
        Create a SARIMA Model 'sarima_model' using method
sm.tsa.arima.SARIMA().
        FIT the model
        Evaluate model using Mean Squared Error(MSE) and Root Mean Squared
Error (RMSE)
        if(RMSE between 0.2 and 0.5 ):
            Accept Model
            Predict result for new_cases for each day for next 90 days.
            Calcualte moving average for 14 days
            if sum of consecutive 14 days <14000
                Malaysia Can achieve average less than 1000 cases per day in
next three months
            else:
                Malaysia Can not achieve average less than 1000 cases per day
in next three months

        else:
            restart modelling
```