To split data into training and test datasets

```
 library(caTools)
 split = sample.split(Data$Mean_Temp, SplitRatio = 0.8)
training_set = subset(Data, split == TRUE)
 test_set= subset(Data, split == FALSE)
View(training_set)
View(test_set)
```

To fit the mlr model

```
Model<-lm(Mean_Temp ~ Mean_Dewpoint+ Mean_Pressure+ Mean_Humidity, training_set)
summary(Model)
```

To find VIF of independent variables

```
library(car)
car::vif(Model)
Model2<-lm(Mean_Temp ~ Mean_Pressure+ Mean_Humidity, training_set)
summary(Model2)
car::vif(Model2)
r = predict(Model2, test_set)
print(r)
```

To predict values for test data

```
plot(r, y=test_set$Mean_Temp, xlab='Predicted Values', ylab='Actual Values', main='Predicted vs. Actual Values')
abline(a=0,b=1)
```

To plot charts

```
par(mfrow=c(2,2))
plot(Model2)
library(car)
avPlots(Model2)
```

Evaluation metrics

```
library(modelr)
data.frame(
  R2 = rsquare(Model2, data = test_set),
  RMSE = rmse(Model2, data = test_set),
  MAE = mae(Model2, data = test_set)
)
```

To predict for any given values used as input

```
predict(Model2, data.frame(Mean_Pressure = 1000, Mean_Humidity=15))
```