Week 8 - REGRESSION MODEL FOR PREDICTION

Apply regression Model techniques to predict the data on above dataset.

```
>#  make sure R knows region is categorical
>str(states.data$region)
 Factor w/ 4 levels "West","N. East",..: 3 1 1 3 1 1 2 3 NA 3 ...
>states.data$region<- factor(states.data$region)
> #Add region to the model
>sat.region<- lm(csat ~ region,
+                 data=states.data)
> #Show the results
>coef(summary(sat.region)) # show regression coefficients table
```

Out put:

```
             Estimate Std. Error t value Pr(>|t|)
(Intercept)      946.3       14.8  63.958 1.35e-46
regionN. East    -56.8       23.1  -2.453 1.80e-02
regionSouth      -16.3       19.9  -0.819 4.17e-01
regionMidwest     63.8       21.4   2.986 4.51e-03
>anova(sat.region) # show ANOVA table
Analysis of Variance Table

Response: csat
Df Sum Sq Mean Sq F value   Pr(>F)
region     3  82049   27350    9.61 0.000049
Residuals 46 130912    2846
>
```