9. COMPLETELY RANDOMIZED DESIGN

MODEL FOR ONE WAY ANOVA

AIM:

To find the ANOVA using CRD to test the null hypothesis (H_0) against alternative hypothesis(H_1) with level of significance , alpha=0.05.

1. From the following table, perform a One Way ANOVA test to test the significance between the groups:

Group 1	Group 2	Group 3	Group 4	Group 5
551	595	639	417	563
457	580	615	449	631
450	508	511	517	522
731	583	573	438	613
499	633	648	415	656
632	517	677	555	679

```
group1<-c(551,457,450,731,499,632)

group2<-c(595,580,508,583,633,517)

group3<-c(639,615,511,573,648,677)

group4<-c(417,449,517,438,415,555)

group5<-c(563,631,522,613,656,679)

group<-data.frame(cbind(group1,group2,group3,group4,group5))

summary(group)

stgr<-stack(group);

crd<-aov(values~ind,data=stgr)

summary(crd)

boxplot(group)
```

2. Suppose the following table represents the sales figures of the 3 new menu items in the 18 restaurants after a week of test marketing. At .05 level of significance, test whether the mean sales volume for the 3 new menu items are all equal.

Item1	Item2	Item3
22	52	16
42	33	24
44	8	19
52	47	18
45	43	34
37	32	39