```
# read in data
mydata=read.table("Final Cog data.txt", header=T)

#set up codes
NOPRESSURE=1
PRESSURE=2

FEMALE=1
MALE=2

ASIAN=1
WHITE=2
BLACK=3
HISPANIC=4

AVEWM=6.3

#####comparing accuracy#####

#pressure vs no pressure
nopresh=mydata[mydata$Condition==NOPRESSURE,]$Accuracy
presh=mydata[mydata$Condition==PRESSURE,]$Accuracy
t.test(nopresh, presh, alternative="two.sided", paired=F)

##gender##

#pressure male vs no pressure male
nopreshmale=mydata[mydata$Condition==NOPRESSURE & mydata$Gender==MALE,]$Accuracy
preshmale=mydata[mydata$Condition==PRESSURE & mydata$Gender==MALE,]$Accuracy
t.test(nopreshmale, preshmale, alternative="two.sided", paired=F)

#pressure female vs no pressure female
nopreshfemale=mydata[mydata$Condition==NOPRESSURE & mydata$Gender==FEMALE,]$Accuracy
preshfemale=mydata[mydata$Condition==PRESSURE & mydata$Gender==FEMALE,]$Accuracy
t.test(nopreshfemale, preshfemale, alternative="two.sided", paired=F)

##race##

#pressure asian vs no pressure asian
####COULD BE SIGNIFICANT#### LOOK AT SOME MORE
nopreshasian=mydata[mydata$Condition==NOPRESSURE & mydata$Race==ASIAN,]$Accuracy
preshasian=mydata[mydata$Condition==PRESSURE & mydata$Race==ASIAN,]$Accuracy
t.test(nopreshasian, preshasian, alternative="two.sided", paired=F)

#pressure white vs no pressure white
nopreshwhite=mydata[mydata$Condition==NOPRESSURE & mydata$Race==WHITE,]$Accuracy
preshwhite=mydata[mydata$Condition==PRESSURE & mydata$Race==WHITE,]$Accuracy
t.test(nopreshwhite, preshwhite, alternative="two.sided", paired=F)

##working memory##

#correlation between working memory and accuracy
cor.test(mydata$WM, mydata$Accuracy)
plot(mydata$WM, mydata$Accuracy)
```

```
#create new data set only for people with high and low working memory
#analyze correlation between high working memory and accuracy in pressure?????

highwmdata=mydata[mydata$WM>AVEWM,]
highwmpreshdata=highwmdata[highwmdata$Condition==PRESSURE,]
cor.test(highwmpreshdata$WM, highwmpreshdata$Accuracy)
plot(highwmpreshdata$WM, highwmpreshdata$Accuracy)

lowwmdata=mydata[mydata$WM<AVEWM,]
lowwmpreshdata=lowwmdata[lowwmdata$Condition==PRESSURE,]
cor.test(lowwmpreshdata$WM, lowwmpreshdata$Accuracy)
plot(lowwmpreshdata$WM, lowwmpreshdata$Accuracy)

#high working memory pressure vs low working memory pressure
#####COULD BE SIGNIFICANT#####
highwmpresh=mydata[mydata$WM>AVEWM & mydata$Condition==PRESSURE,]$Accuracy
lowwmpresh=mydata[mydata$WM<AVEWM & mydata$Condition==PRESSURE,]$Accuracy
t.test(highwmpresh, lowwmpresh, alternative="two.sided", paired=F)

#high working memory no pressure vs low working memory no pressure
highwmnopresh=mydata[mydata$WM>AVEWM & mydata$Condition==NOPRESSURE,]$Accuracy
lowwmnopresh=mydata[mydata$WM<AVEWM & mydata$Condition==NOPRESSURE,]$Accuracy
t.test(highwmnopresh, lowwmnopresh, alternative="two.sided", paired=F)


#create new high working memory column
mydata$HighWM=(mydata$WM>AVEWM)

AccuracyANOVA=data.frame(cbind(found, AccuracybyCondition[found]))
AccuracyANOVA$Gender=factor(AccuracyANOVA$Gender)
AccuracyANOVA$Condition=factor(AccuracyANOVA$Condition)
AccuracyANOVA$HighWM=factor(AccuracyANOVA$HighWM)
```