INSTALL THE IATGEN LIBRARY IF NOT INSTALLED ####

if("iatgen" %in% rownames(installed.packages()) == FALSE) {

install.packages("devtools")

install.packages("stringr")

install.packages("gtools")

install.packages("dplyr")

library(gtools)

devtools::install\_github("iatgen/iatgen")

library(iatgen)

}

#### LOAD THE IATGEN LIBRARY ####

library(iatgen)

library(dplyr)

#Allow for extended print

options(max.print=1000000)

## Download IAT csv file from Qualtrics, save file to specific location

##Set your working directory In R, Files->Folder chosen above-> More-> Set Working Directory

##Note: location of file is caps sensitive and cannot be moved once data is to be analyzed##

# Copy code below into new R script window, not the console

#Highlight all of the code and click run

readdat<-read.csv('3\_15.csv')

###Ethnic IAT White###

datEW = readdat[c("FirstSeen", "SecondSeen", "ThirdSeen", "ID", "Q1.RP1.EW", "Q2.RP2.EW", "Q3.RP3.EW", "Q4.RP4.EW", "Q5.RP5.EW", "Q6.RP6.EW", "Q7.RP7.EW", "Q8.RN1.EW", "Q9.RN2.EW", "Q10.RN3.EW", "Q11.RN4.EW", "Q12.RN5.EW", "Q13.RN6.EW", "Q14.RN7.EW", "Q15.LP1.EW", "Q16.LP2.EW", "Q17.LP3.EW", "Q18.LP4.EW", "Q19.LP5.EW", "Q20.LP6.EW", "Q21.LP7.EW", "Q22.LN1.EW", "Q23.LN2.EW", "Q24.LN3.EW", "Q25.LN4.EW", "Q26.LN5.EW", "Q27.LN6.EW", "Q28.LN7.EW")];

### Collapse IAT data down ####

datEW$compatible.crit <- combineIATfourblocks(datEW$Q4.RP4.EW, datEW$Q18.LP4.EW, datEW$Q14.RN7.EW, datEW$Q28.LN7.EW)

datEW$incompatible.crit <- combineIATfourblocks(datEW$Q7.RP7.EW, datEW$Q21.LP7.EW, datEW$Q11.RN4.EW, datEW$Q25.LN4.EW)

### Collapse IAT practice blocks ####

datEW$compatible.prac<- combineIATfourblocks(datEW$Q3.RP3.EW, datEW$Q17.LP3.EW, datEW$Q13.RN6.EW, datEW$Q27.LN6.EW)

datEW$incompatible.prac <- combineIATfourblocks(datEW$Q6.RP6.EW, datEW$Q20.LP6.EW, datEW$Q10.RN3.EW, datEW$Q24.LN3.EW)

### Clean the IAT ###

clean <- cleanIAT(prac1=datEW$compatible.prac,

crit1=datEW$compatible.crit,

prac2=datEW$incompatible.prac,

crit2=datEW$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

#Calculate D1 and D2

clean <- transform(clean, D1Eth = diff.prac / inclusive.sd.prac, D2Eth = diff.crit / inclusive.sd.crit)

ethnicwhite <- (DTEth=clean[["D"]])

######Ethnic IAT Hispanic#####

datEH = readdat[c("Q1.RP1.EH", "Q2.RP2.EH", "Q3.RP3.EH", "Q4.RP4.EH", "Q5.RP5.EH", "Q6.RP6.EH", "Q7.RP7.EH", "Q8.RN1.EH", "Q9.RN2.EH", "Q10.RN3.EH", "Q11.RN4.EH", "Q12.RN5.EH", "Q13.RN6.EH", "Q14.RN7.EH", "Q15.LP1.EH", "Q16.LP2.EH", "Q17.LP3.EH", "Q18.LP4.EH", "Q19.LP5.EH", "Q20.LP6.EH", "Q21.LP7.EH", "Q22.LN1.EH", "Q23.LN2.EH", "Q24.LN3.EH", "Q25.LN4.EH", "Q26.LN5.EH", "Q27.LN6.EH", "Q28.LN7.EH")];

### Collapse IAT data doHn ####

datEH$compatible.crit <- combineIATfourblocks(datEH$Q4.RP4.EH, datEH$Q18.LP4.EH, datEH$Q14.RN7.EH, datEH$Q28.LN7.EH)

datEH$incompatible.crit <- combineIATfourblocks(datEH$Q7.RP7.EH, datEH$Q21.LP7.EH, datEH$Q11.RN4.EH, datEH$Q25.LN4.EH)

### Collapse IAT practice blocks ####

datEH$compatible.prac<- combineIATfourblocks(datEH$Q3.RP3.EH, datEH$Q17.LP3.EH, datEH$Q13.RN6.EH, datEH$Q27.LN6.EH)

datEH$incompatible.prac <- combineIATfourblocks(datEH$Q6.RP6.EH, datEH$Q20.LP6.EH, datEH$Q10.RN3.EH, datEH$Q24.LN3.EH)

### Clean the IAT ###

clean2 <- cleanIAT(prac1=datEH$compatible.prac,

crit1=datEH$compatible.crit,

prac2=datEH$incompatible.prac,

crit2=datEH$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

#Calculate D1 and D2

clean2 <- transform(clean2, D1Eth = diff.prac / inclusive.sd.prac, D2Eth = diff.crit / inclusive.sd.crit)

ethnichispanic <- (DTEth=clean2[["D"]])

####Science Domain####

datDS=readdat[c( "Q1.RP1.DS", "Q2.RP2.DS", "Q3.RP3.DS", "Q4.RP4.DS", "Q5.RP5.DS", "Q6.RP6.DS", "Q7.RP7.DS", "Q8.RN1.DS", "Q9.RN2.DS", "Q10.RN3.DS", "Q11.RN4.DS", "Q12.RN5.DS", "Q13.RN6.DS", "Q14.RN7.DS", "Q15.LP1.DS", "Q16.LP2.DS", "Q17.LP3.DS", "Q18.LP4.DS", "Q19.LP5.DS", "Q20.LP6.DS", "Q21.LP7.DS", "Q22.LN1.DS", "Q23.LN2.DS", "Q24.LN3.DS", "Q25.LN4.DS", "Q26.LN5.DS", "Q27.LN6.DS", "Q28.LN7.DS")];

##NEW##

### Collapse IAT data down ####

datDS$compatible.crit <- combineIATfourblocks(datDS$Q4.RP4.DS, datDS$Q18.LP4.DS, datDS$Q14.RN7.DS, datDS$Q28.LN7.DS)

datDS$incompatible.crit <- combineIATfourblocks(datDS$Q7.RP7.DS, datDS$Q21.LP7.DS, datDS$Q11.RN4.DS, datDS$Q25.LN4.DS)

### Collapse IAT practice blocks ####

datDS$compatible.prac<- combineIATfourblocks(datDS$Q3.RP3.DS, datDS$Q17.LP3.DS, datDS$Q13.RN6.DS, datDS$Q27.LN6.DS)

datDS$incompatible.prac <- combineIATfourblocks(datDS$Q6.RP6.DS, datDS$Q20.LP6.DS, datDS$Q10.RN3.DS, datDS$Q24.LN3.DS)

### Clean the IAT ###

clean3 <- cleanIAT(prac1=datDS$compatible.prac,

crit1=datDS$compatible.crit,

prac2=datDS$incompatible.prac,

crit2=datDS$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

#Calculate D1 and D2

clean3 <- transform(clean3, D1Domain = diff.prac / inclusive.sd.prac, D2Domain = diff.crit / inclusive.sd.crit)

domainsci <- cbind(D1Domain=clean3["D1Domain"], D2Domain=clean3["D2Domain"], DTDomain=clean3[["D"]])

####Domain Math IAT####

datMD=readdat[c( "Q1.RP1.DM", "Q2.RP2.DM", "Q3.RP3.DM", "Q4.RP4.DM", "Q5.RP5.DM", "Q6.RP6.DM", "Q7.RP7.DM", "Q8.RN1.DM", "Q9.RN2.DM", "Q10.RN3.DM", "Q11.RN4.DM", "Q12.RN5.DM", "Q13.RN6.DM", "Q14.RN7.DM", "Q15.LP1.DM", "Q16.LP2.DM", "Q17.LP3.DM", "Q18.LP4.DM", "Q19.LP5.DM", "Q20.LP6.DM", "Q21.LP7.DM", "Q22.LN1.DM", "Q23.LN2.DM", "Q24.LN3.DM", "Q25.LN4.DM", "Q26.LN5.DM", "Q27.LN6.DM", "Q28.LN7.DM")];

##NEW##

### Collapse IAT data down ####

datMD$compatible.crit <- combineIATfourblocks(datMD$Q4.RP4.DM, datMD$Q18.LP4.DM, datMD$Q14.RN7.DM, datMD$Q28.LN7.DM)

datMD$incompatible.crit <- combineIATfourblocks(datMD$Q7.RP7.DM, datMD$Q21.LP7.DM, datMD$Q11.RN4.DM, datMD$Q25.LN4.DM)

### Collapse IAT practice blocks ####

datMD$compatible.prac<- combineIATfourblocks(datMD$Q3.RP3.DM, datMD$Q17.LP3.DM, datMD$Q13.RN6.DM, datMD$Q27.LN6.DM)

datMD$incompatible.prac <- combineIATfourblocks(datMD$Q6.RP6.DM, datMD$Q20.LP6.DM, datMD$Q10.RN3.DM, datMD$Q24.LN3.DM)

### Clean the IAT ###

clean4 <- cleanIAT(prac1=datMD$compatible.prac,

crit1=datMD$compatible.crit,

prac2=datMD$incompatible.prac,

crit2=datMD$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

#Calculate D1 and D2

clean4 <- transform(clean4, D1Domain = diff.prac / inclusive.sd.prac, D2Domain = diff.crit / inclusive.sd.crit)

domainmath<- cbind(D1Domain=clean4["D1Domain"], D2Domain=clean4["D2Domain"], DTDomain=clean4[["D"]])

####Engineering Domain IAT####

datED=readdat[c( "Q1.RP1.DE", "Q2.RP2.DE", "Q3.RP3.DE", "Q4.RP4.DE", "Q5.RP5.DE", "Q6.RP6.DE", "Q7.RP7.DE", "Q8.RN1.DE", "Q9.RN2.DE", "Q10.RN3.DE", "Q11.RN4.DE", "Q12.RN5.DE", "Q13.RN6.DE", "Q14.RN7.DE", "Q15.LP1.DE", "Q16.LP2.DE", "Q17.LP3.DE", "Q18.LP4.DE", "Q19.LP5.DE", "Q20.LP6.DE", "Q21.LP7.DE", "Q22.LN1.DE", "Q23.LN2.DE", "Q24.LN3.DE", "Q25.LN4.DE", "Q26.LN5.DE", "Q27.LN6.DE", "Q28.LN7.DE")];

##NEW##

### Collapse IAT data down ####

datED$compatible.crit <- combineIATfourblocks(datED$Q4.RP4.DE, datED$Q18.LP4.DE, datED$Q14.RN7.DE, datED$Q28.LN7.DE)

datED$incompatible.crit <- combineIATfourblocks(datED$Q7.RP7.DE, datED$Q21.LP7.DE, datED$Q11.RN4.DE, datED$Q25.LN4.DE)

### Collapse IAT practice blocks ####

datED$compatible.prac<- combineIATfourblocks(datED$Q3.RP3.DE, datED$Q17.LP3.DE, datED$Q13.RN6.DE, datED$Q27.LN6.DE)

datED$incompatible.prac <- combineIATfourblocks(datED$Q6.RP6.DE, datED$Q20.LP6.DE, datED$Q10.RN3.DE, datED$Q24.LN3.DE)

### Clean the IAT ###

clean5 <- cleanIAT(prac1=datED$compatible.prac,

crit1=datED$compatible.crit,

prac2=datED$incompatible.prac,

crit2=datED$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

#Calculate D1 and D2

clean5 <- transform(clean5, D1Domain = diff.prac / inclusive.sd.prac, D2Domain = diff.crit / inclusive.sd.crit)

domaineng<- cbind(D1Domain=clean5["D1Domain"], D2Domain=clean5["D2Domain"], DTDomain=clean5[["D"]])

####Computer Science Domain IAT####

####HAVE TO DELETE THE PERIOD IN Q2.RP2.D.CS LATER!!!!!!#####

datCSD=readdat[c("Q1.RP1.DCS", "Q2.RP2.DCS", "Q3.RP3.DCS", "Q4.RP4.DCS", "Q5.RP5.DCS", "Q6.RP6.DCS", "Q7.RP7.DCS", "Q8.RN1.DCS", "Q9.RN2.DCS", "Q10.RN3.DCS", "Q11.RN4.DCS", "Q12.RN5.DCS", "Q13.RN6.DCS", "Q14.RN7.DCS", "Q15.LP1.DCS", "Q16.LP2.DCS", "Q17.LP3.DCS", "Q18.LP4.DCS", "Q19.LP5.DCS", "Q20.LP6.DCS", "Q21.LP7.DCS", "Q22.LN1.DCS", "Q23.LN2.DCS", "Q24.LN3.DCS", "Q25.LN4.DCS", "Q26.LN5.DCS", "Q27.LN6.DCS", "Q28.LN7.DCS")];

##NEW##

### Collapse IAT data down ####

datCSD$compatible.crit <- combineIATfourblocks(datCSD$Q4.RP4.DCS, datCSD$Q18.LP4.DCS, datCSD$Q14.RN7.DCS, datCSD$Q28.LN7.DCS)

datCSD$incompatible.crit <- combineIATfourblocks(datCSD$Q7.RP7.DCS, datCSD$Q21.LP7.DCS, datCSD$Q11.RN4.DCS, datCSD$Q25.LN4.DCS)

### Collapse IAT practice blocks ####

datCSD$compatible.prac<- combineIATfourblocks(datCSD$Q3.RP3.DCS, datCSD$Q17.LP3.DCS, datCSD$Q13.RN6.DCS, datCSD$Q27.LN6.DCS)

datCSD$incompatible.prac <- combineIATfourblocks(datCSD$Q6.RP6.DCS, datCSD$Q20.LP6.DCS, datCSD$Q10.RN3.DCS, datCSD$Q24.LN3.DCS)

### Clean the IAT ###

clean6 <- cleanIAT(prac1=datCSD$compatible.prac,

crit1=datCSD$compatible.crit,

prac2=datCSD$incompatible.prac,

crit2=datCSD$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

#Calculate D1 and D2

clean6 <- transform(clean6, D1Domain = diff.prac / inclusive.sd.prac, D2Domain = diff.crit / inclusive.sd.crit)

domaincompsci<- cbind(D1Domain=clean6["D1Domain"], D2Domain=clean6["D2Domain"], DTDomain=clean6[["D"]])

###Software Engineering Domain IAT###

datSED=readdat[c( "Q1.RP1.DSE", "Q2.RP2.DSE", "Q3.RP3.DSE", "Q4.RP4.DSE", "Q5.RP5.DSE", "Q6.RP6.DSE", "Q7.RP7.DSE", "Q8.RN1.DSE", "Q9.RN2.DSE", "Q10.RN3.DSE", "Q11.RN4.DSE", "Q12.RN5.DSE", "Q13.RN6.DSE", "Q14.RN7.DSE", "Q15.LP1.DSE", "Q16.LP2.DSE", "Q17.LP3.DSE", "Q18.LP4.DSE", "Q19.LP5.DSE", "Q20.LP6.DSE", "Q21.LP7.DSE", "Q22.LN1.DSE", "Q23.LN2.DSE", "Q24.LN3.DSE", "Q25.LN4.DSE", "Q26.LN5.DSE", "Q27.LN6.DSE", "Q28.LN7.DSE")];

### Collapse IAT data down ####

datSED$compatible.crit <- combineIATfourblocks(datSED$Q4.RP4.DSE, datSED$Q18.LP4.DSE, datSED$Q14.RN7.DSE, datSED$Q28.LN7.DSE)

datSED$incompatible.crit <- combineIATfourblocks(datSED$Q7.RP7.DSE, datSED$Q21.LP7.DSE, datSED$Q11.RN4.DSE, datSED$Q25.LN4.DSE)

### Collapse IAT practice blocks ####

datSED$compatible.prac<- combineIATfourblocks(datSED$Q3.RP3.DSE, datSED$Q17.LP3.DSE, datSED$Q13.RN6.DSE, datSED$Q27.LN6.DSE)

datSED$incompatible.prac <- combineIATfourblocks(datSED$Q6.RP6.DSE, datSED$Q20.LP6.DSE, datSED$Q10.RN3.DSE, datSED$Q24.LN3.DSE)

### Clean the IAT ###

clean7 <- cleanIAT(prac1=datSED$compatible.prac,

crit1=datSED$compatible.crit,

prac2=datSED$incompatible.prac,

crit2=datSED$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

#Calculate D1 and D2

clean7 <- transform(clean7, D1Domain = diff.prac / inclusive.sd.prac, D2Domain = diff.crit / inclusive.sd.crit)

domainsofteng<- cbind(D1Domain=clean7["D1Domain"], D2Domain=clean7["D2Domain"], DTDomain=clean7[["D"]])

###Hispanic Computer Science IAT###

###HISPANIC\_CS\_STEREOTYPEIAT###

datHCSS=readdat[c( "Q1.RP1.SCSH", "Q2.RP2.SCSH", "Q3.RP3.SCSH", "Q4.RP4.SCSH", "Q5.RP5.SCSH", "Q6.RP6.SCSH", "Q7.RP7.SCSH", "Q8.RN1.SCSH", "Q9.RN2.SCSH", "Q10.RN3.SCSH", "Q11.RN4.SCSH", "Q12.RN5.SCSH", "Q13.RN6.SCSH", "Q14.RN7.SCSH", "Q15.LP1.SCSH", "Q16.LP2.SCSH", "Q17.LP3.SCSH", "Q18.LP4.SCSH", "Q19.LP5.SCSH", "Q20.LP6.SCSH", "Q21.LP7.SCSH", "Q22.LN1.SCSH", "Q23.LN2.SCSH", "Q24.LN3.SCSH", "Q25.LN4.SCSH", "Q26.LN5.SCSH", "Q27.LN6.SCSH", "Q28.LN7.SCSH")];

### Collapse IAT data down ####

datHCSS$compatible.crit <- combineIATfourblocks(datHCSS$Q4.RP4.SCSH, datHCSS$Q18.LP4.SCSH, datHCSS$Q14.RN7.SCSH, datHCSS$Q28.LN7.SCSH)

datHCSS$incompatible.crit <- combineIATfourblocks(datHCSS$Q7.RP7.SCSH, datHCSS$Q21.LP7.SCSH, datHCSS$Q11.RN4.SCSH, datHCSS$Q25.LN4.SCSH)

### Collapse IAT practice blocks ####

datHCSS$compatible.prac<- combineIATfourblocks(datHCSS$Q3.RP3.SCSH, datHCSS$Q17.LP3.SCSH, datHCSS$Q13.RN6.SCSH, datHCSS$Q27.LN6.SCSH)

datHCSS$incompatible.prac <- combineIATfourblocks(datHCSS$Q6.RP6.SCSH, datHCSS$Q20.LP6.SCSH, datHCSS$Q10.RN3.SCSH, datHCSS$Q24.LN3.SCSH)

### Clean the IAT ###

clean8 <- cleanIAT(prac1=datHCSS$compatible.prac,

crit1=datHCSS$compatible.crit,

prac2=datHCSS$incompatible.prac,

crit2=datHCSS$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

clean8 <- transform(clean8, D1EthSter = diff.prac / inclusive.sd.prac, D2EthSter = diff.crit / inclusive.sd.crit)

hiscsster<- cbind(D1EthSter=clean8["D1EthSter"], D2EthSter=clean8["D2EthSter"], DTEthSter=clean8[["D"]])

###Hispanic Engineering Stereotype IAT###

datHES=readdat[c( "Q1.RP1.SEH", "Q2.RP2.SEH", "Q3.RP3.SEH", "Q4.RP4.SEH", "Q5.RP5.SEH", "Q6.RP6.SEH", "Q7.RP7.SEH", "Q8.RN1.SEH", "Q9.RN2.SEH", "Q10.RN3.SEH", "Q11.RN4.SEH", "Q12.RN5.SEH", "Q13.RN6.SEH", "Q14.RN7.SEH", "Q15.LP1.SEH", "Q16.LP2.SEH", "Q17.LP3.SEH", "Q18.LP4.SEH", "Q19.LP5.SEH", "Q20.LP6.SEH", "Q21.LP7.SEH", "Q22.LN1.SEH", "Q23.LN2.SEH", "Q24.LN3.SEH", "Q25.LN4.SEH", "Q26.LN5.SEH", "Q27.LN6.SEH", "Q28.LN7.SEH")];

### Collapse IAT data doHn ####

datHES$compatible.crit <- combineIATfourblocks(datHES$Q4.RP4.SEH, datHES$Q18.LP4.SEH, datHES$Q14.RN7.SEH, datHES$Q28.LN7.SEH)

datHES$incompatible.crit <- combineIATfourblocks(datHES$Q7.RP7.SEH, datHES$Q21.LP7.SEH, datHES$Q11.RN4.SEH, datHES$Q25.LN4.SEH)

### Collapse IAT practice blocks ####

datHES$compatible.prac<- combineIATfourblocks(datHES$Q3.RP3.SEH, datHES$Q17.LP3.SEH, datHES$Q13.RN6.SEH, datHES$Q27.LN6.SEH)

datHES$incompatible.prac <- combineIATfourblocks(datHES$Q6.RP6.SEH, datHES$Q20.LP6.SEH, datHES$Q10.RN3.SEH, datHES$Q24.LN3.SEH)

### Clean the IAT ###

clean9 <- cleanIAT(prac1=datHES$compatible.prac,

crit1=datHES$compatible.crit,

prac2=datHES$incompatible.prac,

crit2=datHES$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

clean9 <- transform(clean9, D1EthSter = diff.prac / inclusive.sd.prac, D2EthSter = diff.crit / inclusive.sd.crit)

hisengster<- cbind(D1EthSter=clean9["D1EthSter"], D2EthSter=clean9["D2EthSter"], DTEthSter=clean9[["D"]])

###Hispanic Math Stereotype IAT###

datHMS=readdat[c( "Q1.RP1.SMH", "Q2.RP2.SMH", "Q3.RP3.SMH", "Q4.RP4.SMH", "Q5.RP5.SMH", "Q6.RP6.SMH", "Q7.RP7.SMH", "Q8.RN1.SMH", "Q9.RN2.SMH", "Q10.RN3.SMH", "Q11.RN4.SMH", "Q12.RN5.SMH", "Q13.RN6.SMH", "Q14.RN7.SMH", "Q15.LP1.SMH", "Q16.LP2.SMH", "Q17.LP3.SMH", "Q18.LP4.SMH", "Q19.LP5.SMH", "Q20.LP6.SMH", "Q21.LP7.SMH", "Q22.LN1.SMH", "Q23.LN2.SMH", "Q24.LN3.SMH", "Q25.LN4.SMH", "Q26.LN5.SMH", "Q27.LN6.SMH", "Q28.LN7.SMH")];

### Collapse IAT data doHn ####

datHMS$compatible.crit <- combineIATfourblocks(datHMS$Q4.RP4.SMH, datHMS$Q18.LP4.SMH, datHMS$Q14.RN7.SMH, datHMS$Q28.LN7.SMH)

datHMS$incompatible.crit <- combineIATfourblocks(datHMS$Q7.RP7.SMH, datHMS$Q21.LP7.SMH, datHMS$Q11.RN4.SMH, datHMS$Q25.LN4.SMH)

### Collapse IAT practice blocks ####

datHMS$compatible.prac<- combineIATfourblocks(datHMS$Q3.RP3.SMH, datHMS$Q17.LP3.SMH, datHMS$Q13.RN6.SMH, datHMS$Q27.LN6.SMH)

datHMS$incompatible.prac <- combineIATfourblocks(datHMS$Q6.RP6.SMH, datHMS$Q20.LP6.SMH, datHMS$Q10.RN3.SMH, datHMS$Q24.LN3.SMH)

### Clean the IAT ###

clean10 <- cleanIAT(prac1=datHMS$compatible.prac,

crit1=datHMS$compatible.crit,

prac2=datHMS$incompatible.prac,

crit2=datHMS$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

clean10 <- transform(clean10, D1EthSter = diff.prac / inclusive.sd.prac, D2EthSter = diff.crit / inclusive.sd.crit)

hismathster<- cbind(D1EthSter=clean10["D1EthSter"], D2EthSter=clean10["D2EthSter"], DTEthSter=clean10[["D"]])

###HISPANIC\_SCI\_STEREOTYPEIAT###

datSSH=readdat[c( "Q1.RP1.SSH", "Q2.RP2.SSH", "Q3.RP3.SSH", "Q4.RP4.SSH", "Q5.RP5.SSH", "Q6.RP6.SSH", "Q7.RP7.SSH", "Q8.RN1.SSH", "Q9.RN2.SSH", "Q10.RN3.SSH", "Q11.RN4.SSH", "Q12.RN5.SSH", "Q13.RN6.SSH", "Q14.RN7.SSH", "Q15.LP1.SSH", "Q16.LP2.SSH", "Q17.LP3.SSH", "Q18.LP4.SSH", "Q19.LP5.SSH", "Q20.LP6.SSH", "Q21.LP7.SSH", "Q22.LN1.SSH", "Q23.LN2.SSH", "Q24.LN3.SSH", "Q25.LN4.SSH", "Q26.LN5.SSH", "Q27.LN6.SSH", "Q28.LN7.SSH")];

### Collapse IAT data doHn ####

datSSH$compatible.crit <- combineIATfourblocks(datSSH$Q4.RP4.SSH, datSSH$Q18.LP4.SSH, datSSH$Q14.RN7.SSH, datSSH$Q28.LN7.SSH)

datSSH$incompatible.crit <- combineIATfourblocks(datSSH$Q7.RP7.SSH, datSSH$Q21.LP7.SSH, datSSH$Q11.RN4.SSH, datSSH$Q25.LN4.SSH)

### Collapse IAT practice blocks ####

datSSH$compatible.prac<- combineIATfourblocks(datSSH$Q3.RP3.SSH, datSSH$Q17.LP3.SSH, datSSH$Q13.RN6.SSH, datSSH$Q27.LN6.SSH)

datSSH$incompatible.prac <- combineIATfourblocks(datSSH$Q6.RP6.SSH, datSSH$Q20.LP6.SSH, datSSH$Q10.RN3.SSH, datSSH$Q24.LN3.SSH)

### Clean the IAT ###

clean11 <- cleanIAT(prac1=datSSH$compatible.prac,

crit1=datSSH$compatible.crit,

prac2=datSSH$incompatible.prac,

crit2=datSSH$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

clean11 <- transform(clean11, D1EthSter = diff.prac / inclusive.sd.prac, D2EthSter = diff.crit / inclusive.sd.crit)

hisscister <- cbind(D1EthSter=clean11["D1EthSter"], D2EthSter=clean11["D2EthSter"], DTEthSter=clean11[["D"]])

####Hispanic Software Engineering Stereotype IAT####

datHSES=readdat[c( "Q1.RP1.SSEH", "Q2.RP2.SSEH", "Q3.RP3.SSEH", "Q4.RP4.SSEH", "Q5.RP5.SSEH", "Q6.RP6.SSEH", "Q7.RP7.SSEH", "Q8.RN1.SSEH", "Q9.RN2.SSEH", "Q10.RN3.SSEH", "Q11.RN4.SSEH", "Q12.RN5.SSEH", "Q13.RN6.SSEH", "Q14.RN7.SSEH", "Q15.LP1.SSEH", "Q16.LP2.SSEH", "Q17.LP3.SSEH", "Q18.LP4.SSEH", "Q19.LP5.SSEH", "Q20.LP6.SSEH", "Q21.LP7.SSEH", "Q22.LN1.SSEH", "Q23.LN2.SSEH", "Q24.LN3.SSEH", "Q25.LN4.SSEH", "Q26.LN5.SSEH", "Q27.LN6.SSEH", "Q28.LN7.SSEH")];

### Collapse IAT data down ####

datHSES$compatible.crit <- combineIATfourblocks(datHSES$Q4.RP4.SSEH, datHSES$Q18.LP4.SSEH, datHSES$Q14.RN7.SSEH, datHSES$Q28.LN7.SSEH)

datHSES$incompatible.crit <- combineIATfourblocks(datHSES$Q7.RP7.SSEH, datHSES$Q21.LP7.SSEH, datHSES$Q11.RN4.SSEH, datHSES$Q25.LN4.SSEH)

### Collapse IAT practice blocks ####

datHSES$compatible.prac<- combineIATfourblocks(datHSES$Q3.RP3.SSEH, datHSES$Q17.LP3.SSEH, datHSES$Q13.RN6.SSEH, datHSES$Q27.LN6.SSEH)

datHSES$incompatible.prac <- combineIATfourblocks(datHSES$Q6.RP6.SSEH, datHSES$Q20.LP6.SSEH, datHSES$Q10.RN3.SSEH, datHSES$Q24.LN3.SSEH)

### Clean the IAT ###

clean12 <- cleanIAT(prac1=datHSES$compatible.prac,

crit1=datHSES$compatible.crit,

prac2=datHSES$incompatible.prac,

crit2=datHSES$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

clean12 <- transform(clean12, D1EthSter = diff.prac / inclusive.sd.prac, D2EthSter = diff.crit / inclusive.sd.crit)

hissoftster <- cbind(D1EthSter=clean12["D1EthSter"], D2EthSter=clean12["D2EthSter"], DTEthSter=clean12[["D"]])

###White Science Stereotype IAT###

datSSW=readdat[c( "Q1.RP1.SSW", "Q2.RP2.SSW", "Q3.RP3.SSW", "Q4.RP4.SSW", "Q5.RP5.SSW", "Q6.RP6.SSW", "Q7.RP7.SSW", "Q8.RN1.SSW", "Q9.RN2.SSW", "Q10.RN3.SSW", "Q11.RN4.SSW", "Q12.RN5.SSW", "Q13.RN6.SSW", "Q14.RN7.SSW", "Q15.LP1.SSW", "Q16.LP2.SSW", "Q17.LP3.SSW", "Q18.LP4.SSW", "Q19.LP5.SSW", "Q20.LP6.SSW", "Q21.LP7.SSW", "Q22.LN1.SSW", "Q23.LN2.SSW", "Q24.LN3.SSW", "Q25.LN4.SSW", "Q26.LN5.SSW", "Q27.LN6.SSW", "Q28.LN7.SSW")];

### Collapse IAT data down ####

datSSW$compatible.crit <- combineIATfourblocks(datSSW$Q4.RP4.SSW, datSSW$Q18.LP4.SSW, datSSW$Q14.RN7.SSW, datSSW$Q28.LN7.SSW)

datSSW$incompatible.crit <- combineIATfourblocks(datSSW$Q7.RP7.SSW, datSSW$Q21.LP7.SSW, datSSW$Q11.RN4.SSW, datSSW$Q25.LN4.SSW)

### Collapse IAT practice blocks ####

datSSW$compatible.prac<- combineIATfourblocks(datSSW$Q3.RP3.SSW, datSSW$Q17.LP3.SSW, datSSW$Q13.RN6.SSW, datSSW$Q27.LN6.SSW)

datSSW$incompatible.prac <- combineIATfourblocks(datSSW$Q6.RP6.SSW, datSSW$Q20.LP6.SSW, datSSW$Q10.RN3.SSW, datSSW$Q24.LN3.SSW)

### Clean the IAT ###

clean13 <- cleanIAT(prac1=datSSW$compatible.prac,

crit1=datSSW$compatible.crit,

prac2=datSSW$incompatible.prac,

crit2=datSSW$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

clean13 <- transform(clean13, D1EthSter = diff.prac / inclusive.sd.prac, D2EthSter = diff.crit / inclusive.sd.crit)

sterwhitesci <- cbind(D1EthSter=clean13["D1EthSter"], D2EthSter=clean13["D2EthSter"], DTEthSter=clean13[["D"]])

###White Math Stereotype IAT###

datWMS=readdat[c( "Q1.RP1.SMW", "Q2.RP2.SMW", "Q3.RP3.SMW", "Q4.RP4.SMW", "Q5.RP5.SMW", "Q6.RP6.SMW", "Q7.RP7.SMW", "Q8.RN1.SMW", "Q9.RN2.SMW", "Q10.RN3.SMW", "Q11.RN4.SMW", "Q12.RN5.SMW", "Q13.RN6.SMW", "Q14.RN7.SMW", "Q15.LP1.SMW", "Q16.LP2.SMW", "Q17.LP3.SMW", "Q18.LP4.SMW", "Q19.LP5.SMW", "Q20.LP6.SMW", "Q21.LP7.SMW", "Q22.LN1.SMW", "Q23.LN2.SMW", "Q24.LN3.SMW", "Q25.LN4.SMW", "Q26.LN5.SMW", "Q27.LN6.SMW", "Q28.LN7.SMW")];

##NEW##

### Collapse IAT data down ####

datWMS$compatible.crit <- combineIATfourblocks(datWMS$Q4.RP4.SMW, datWMS$Q18.LP4.SMW, datWMS$Q14.RN7.SMW, datWMS$Q28.LN7.SMW)

datWMS$incompatible.crit <- combineIATfourblocks(datWMS$Q7.RP7.SMW, datWMS$Q21.LP7.SMW, datWMS$Q11.RN4.SMW, datWMS$Q25.LN4.SMW)

### Collapse IAT practice blocks ####

datWMS$compatible.prac<- combineIATfourblocks(datWMS$Q3.RP3.SMW, datWMS$Q17.LP3.SMW, datWMS$Q13.RN6.SMW, datWMS$Q27.LN6.SMW)

datWMS$incompatible.prac <- combineIATfourblocks(datWMS$Q6.RP6.SMW, datWMS$Q20.LP6.SMW, datWMS$Q10.RN3.SMW, datWMS$Q24.LN3.SMW)

### Clean the IAT ###

clean14 <- cleanIAT(prac1=datWMS$compatible.prac,

crit1=datWMS$compatible.crit,

prac2=datWMS$incompatible.prac,

crit2=datWMS$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

clean14 <- transform(clean14, D1EthSter = diff.prac / inclusive.sd.prac, D2EthSter = diff.crit / inclusive.sd.crit)

whitemathster <- cbind(D1EthSter=clean14["D1EthSter"], D2EthSter=clean14["D2EthSter"], DTEthSter=clean14[["D"]])

###White Engineering Stereotype IAT###

datWES=readdat[c( "Q1.RP1.SEW", "Q2.RP2.SEW", "Q3.RP3.SEW", "Q4.RP4.SEW", "Q5.RP5.SEW", "Q6.RP6.SEW", "Q7.RP7.SEW", "Q8.RN1.SEW", "Q9.RN2.SEW", "Q10.RN3.SEW", "Q11.RN4.SEW", "Q12.RN5.SEW", "Q13.RN6.SEW", "Q14.RN7.SEW", "Q15.LP1.SEW", "Q16.LP2.SEW", "Q17.LP3.SEW", "Q18.LP4.SEW", "Q19.LP5.SEW", "Q20.LP6.SEW", "Q21.LP7.SEW", "Q22.LN1.SEW", "Q23.LN2.SEW", "Q24.LN3.SEW", "Q25.LN4.SEW", "Q26.LN5.SEW", "Q27.LN6.SEW", "Q28.LN7.SEW")];

### Collapse IAT data down ####

datWES$compatible.crit <- combineIATfourblocks(datWES$Q4.RP4.SEW, datWES$Q18.LP4.SEW, datWES$Q14.RN7.SEW, datWES$Q28.LN7.SEW)

datWES$incompatible.crit <- combineIATfourblocks(datWES$Q7.RP7.SEW, datWES$Q21.LP7.SEW, datWES$Q11.RN4.SEW, datWES$Q25.LN4.SEW)

### Collapse IAT practice blocks ####

datWES$compatible.prac<- combineIATfourblocks(datWES$Q3.RP3.SEW, datWES$Q17.LP3.SEW, datWES$Q13.RN6.SEW, datWES$Q27.LN6.SEW)

datWES$incompatible.prac <- combineIATfourblocks(datWES$Q6.RP6.SEW, datWES$Q20.LP6.SEW, datWES$Q10.RN3.SEW, datWES$Q24.LN3.SEW)

### Clean the IAT ###

clean15 <- cleanIAT(prac1=datWES$compatible.prac,

crit1=datWES$compatible.crit,

prac2=datWES$incompatible.prac,

crit2=datWES$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

clean15 <- transform(clean15, D1EthSter = diff.prac / inclusive.sd.prac, D2EthSter = diff.crit / inclusive.sd.crit)

whiteengster<- cbind(D1EthSter=clean15["D1EthSter"], D2EthSter=clean15["D2EthSter"], DTEthSter=clean15[["D"]])

###White Computer Science Stereotype IAT###

datWCSS=readdat[c( "Q1.RP1.SCSW", "Q2.RP2.SCSW", "Q3.RP3.SCSW", "Q4.RP4.SCSW", "Q5.RP5.SCSW", "Q6.RP6.SCSW", "Q7.RP7.SCSW", "Q8.RN1.SCSW", "Q9.RN2.SCSW", "Q10.RN3.SCSW", "Q11.RN4.SCSW", "Q12.RN5.SCSW", "Q13.RN6.SCSW", "Q14.RN7.SCSW", "Q15.LP1.SCSW", "Q16.LP2.SCSW", "Q17.LP3.SCSW", "Q18.LP4.SCSW", "Q19.LP5.SCSW", "Q20.LP6.SCSW", "Q21.LP7.SCSW", "Q22.LN1.SCSW", "Q23.LN2.SCSW", "Q24.LN3.SCSW", "Q25.LN4.SCSW", "Q26.LN5.SCSW", "Q27.LN6.SCSW", "Q28.LN7.SCSW")];

### Collapse IAT data down ####

datWCSS$compatible.crit <- combineIATfourblocks(datWCSS$Q4.RP4.SCSW, datWCSS$Q18.LP4.SCSW, datWCSS$Q14.RN7.SCSW, datWCSS$Q28.LN7.SCSW)

datWCSS$incompatible.crit <- combineIATfourblocks(datWCSS$Q7.RP7.SCSW, datWCSS$Q21.LP7.SCSW, datWCSS$Q11.RN4.SCSW, datWCSS$Q25.LN4.SCSW)

### Collapse IAT practice blocks ####

datWCSS$compatible.prac<- combineIATfourblocks(datWCSS$Q3.RP3.SCSW, datWCSS$Q17.LP3.SCSW, datWCSS$Q13.RN6.SCSW, datWCSS$Q27.LN6.SCSW)

datWCSS$incompatible.prac <- combineIATfourblocks(datWCSS$Q6.RP6.SCSW, datWCSS$Q20.LP6.SCSW, datWCSS$Q10.RN3.SCSW, datWCSS$Q24.LN3.SCSW)

### Clean the IAT ###

clean16 <- cleanIAT(prac1=datWCSS$compatible.prac,

crit1=datWCSS$compatible.crit,

prac2=datWCSS$incompatible.prac,

crit2=datWCSS$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

clean16 <- transform(clean16, D1EthSter = diff.prac / inclusive.sd.prac, D2EthSter = diff.crit / inclusive.sd.crit)

whitecsster<- cbind(D1EthSter=clean16["D1EthSter"], D2EthSter=clean16["D2EthSter"], DTEthSter=clean16[["D"]])

###White Software Engineering Stereotype IAT###

datWSES=readdat[c( "Q1.RP1.SSEW", "Q2.RP2.SSEW", "Q3.RP3.SSEW", "Q4.RP4.SSEW", "Q5.RP5.SSEW", "Q6.RP6.SSEW", "Q7.RP7.SSEW", "Q8.RN1.SSEW", "Q9.RN2.SSEW", "Q10.RN3.SSEW", "Q11.RN4.SSEW", "Q12.RN5.SSEW", "Q13.RN6.SSEW", "Q14.RN7.SSEW", "Q15.LP1.SSEW", "Q16.LP2.SSEW", "Q17.LP3.SSEW", "Q18.LP4.SSEW", "Q19.LP5.SSEW", "Q20.LP6.SSEW", "Q21.LP7.SSEW", "Q22.LN1.SSEW", "Q23.LN2.SSEW", "Q24.LN3.SSEW", "Q25.LN4.SSEW", "Q26.LN5.SSEW", "Q27.LN6.SSEW", "Q28.LN7.SSEW")];

### Collapse IAT data down ####

datWSES$compatible.crit <- combineIATfourblocks(datWSES$Q4.RP4.SSEW, datWSES$Q18.LP4.SSEW, datWSES$Q14.RN7.SSEW, datWSES$Q28.LN7.SSEW)

datWSES$incompatible.crit <- combineIATfourblocks(datWSES$Q7.RP7.SSEW, datWSES$Q21.LP7.SSEW, datWSES$Q11.RN4.SSEW, datWSES$Q25.LN4.SSEW)

### Collapse IAT practice blocks ####

datWSES$compatible.prac<- combineIATfourblocks(datWSES$Q3.RP3.SSEW, datWSES$Q17.LP3.SSEW, datWSES$Q13.RN6.SSEW, datWSES$Q27.LN6.SSEW)

datWSES$incompatible.prac <- combineIATfourblocks(datWSES$Q6.RP6.SSEW, datWSES$Q20.LP6.SSEW, datWSES$Q10.RN3.SSEW, datWSES$Q24.LN3.SSEW)

### Clean the IAT ###

clean17 <- cleanIAT(prac1=datWSES$compatible.prac,

crit1=datWSES$compatible.crit,

prac2=datWSES$incompatible.prac,

crit2=datWSES$incompatible.crit,

timeout.drop=TRUE,

timeout.ms=10000,

fasttrial.drop=FALSE,

fastprt.drop=TRUE,

fastprt.percent=.10,

fastprt.ms=300,

error.penalty=TRUE,

error.penalty.ms=600)

clean17 <- transform(clean17, D1EthSter = diff.prac / inclusive.sd.prac, D2EthSter = diff.crit / inclusive.sd.crit)

whitesoftengster<- cbind(D1EthSter=clean17["D1EthSter"], D2EthSter=clean17["D2EthSter"], DTEthSter=clean17[["D"]])

#####################################################

WhiteScience <- cbind(ethnicwhite,domainsci,sterwhitesci)

WhiteEng <- cbind(ethnicwhite,domaineng,whiteengster)

WhiteCompSci <-cbind(ethnicwhite,domaincompsci,whitecsster)

WhiteSoftEng <- cbind(ethnicwhite,domainsofteng,whitesoftengster)

WhiteMath <- cbind(ethnicwhite,domainmath,whitemathster)

HispScience <- cbind(ethnichispanic,domainsci,hisscister)

HispEng <- cbind(ethnichispanic,domaineng,hisengster)

HispCompSci <- cbind(ethnichispanic,domaincompsci,hiscsster)

HispSoftEng <- cbind(ethnichispanic,domainsofteng,hissoftster)

HispMath <- cbind(ethnichispanic,domainmath,hismathster)

##Below is where R combines all ethnic, domain, and stereotype IATs into one at “total”

ethIATcol<-cbind(ethnichispanic,ethnicwhite)

ethIATmean<-rowMeans(ethIATcol,na.rm=TRUE)

ethnicIAT<-data.frame(ethIATmean)

domainIATcol<-cbind(domaincompsci,domaineng,domainmath,domainsci,domainsofteng)

domainIATmean<-rowMeans(domainIATcol,na.rm = TRUE)

domainIAT<-data.frame(domainIATmean)

stereoIATcol<-cbind(whitesoftengster,whitecsster,whiteengster,whitemathster,sterwhitesci,hismathster,hissoftster,hisscister,hisengster,hiscsster)

stereoIAT<-data.frame(rowMeans(stereoIATcol,na.rm = TRUE))

####

total <- cbind(ID=readdat["ExternalReference"],ethnicIAT,domainIAT,stereoIAT)

write.csv(total,file="/Users/Avlonitis/Desktop/total.csv")

##renameing some columns

total%>%

rename(EthnicIAT=rowMeans.ethIATcol..na.rm...TRUE.,

DomainIAT=rowMeans.domainIATcol..na.rm...TRUE.,

StereotypeIAT=rowMeans.stereoIATcol..na.rm...TRUE.

)

##counts up how many rows in the new CSV file have a 0, meaning not complete.

total[rowSums(is.na(total))==0,]

howmanyNA<-rowSums(is.na(total))

#adds up the count taken in the previous code

count<-sum(howmanyNA == '0')

##Type “Count” into your console, and this is your total number of all three complete IATs