#####IMPORT DATA

#Import Excel (.xlsx)

library(readxl)

dat=read\_excel("D:/ASDOS/ASDOS KOMSTAT/Week1/Data1.xlsx");dat

data.frame(dat)

#Import Excel (.csv)

dat=read.csv("D:/ASDOS/ASDOS KOMSTAT/Week1/Data1.csv", header=TRUE, sep=",");dat

#Import Notepad (.txt)

dat=read.table("D:/ASDOS/ASDOS KOMSTAT/Week1/Data1.txt", header=TRUE);dat

#####EXPORT DATA

#Export Excel (.xlsx)

library(writexl)

write\_xlsx(dat,"D:/ASDOS/ASDOS KOMSTAT/Week1/Data2.xlsx")

#Export Excel (.csv)

write.csv(dat,"D:/ASDOS/ASDOS KOMSTAT/Week1/Data2.csv")

#Export Notepad (.txt)

write.table(dat,"D:/ASDOS/ASDOS KOMSTAT/Week1/Data2.txt")

#####KONSTRUKSI VECTOR

a=1:3;a

b=2:4;b

c(a,b) #1 2 3 2 3 4

c(1,1:3) #1 1 2 3

array(1,4) #1 1 1 1

seq(1,3) #1 2 3

seq(3) #1 2 3

seq(1, 2, by = 0.1) #1.1 1.2 1.3 1.4 1.5 ...

seq(0, 6, length.out = 3) #0 3 6

rep(1:4, 2) #1 2 3 4 1 2 3 4

rep(1:4, each = 2) #1 1 2 2 3 3 4 4

rep(c(7 ,9 ,3), 1:3) #7 9 9 3 3 3

#####DATA MANIPULATION

a=c(2, 3, 1, 4);a

length(a)

rev(a) #reverse

a[1] #returns i-th element of a

a[1:2]

a[-1] #delete i-th element of a

a[-c(1 ,2)]

a[a < 3]

which (a == 3)

a > 1

#####ROWNAMES COLNAMES

x=c(1:9);x

dim(x)=c(3,3);x

y=matrix(x,nrow=3, ncol=3);y

z=as.data.frame(y);z

rownames(z)=c("a", "b", "c");z

colnames(z)=c("x", "y", "z");z

#####ARITHMETIC&NUMERICAL OP

a=5

b=2

c=a+b; c

a-b

a\*b

a/b

a^b

sqrt(a)

d=a^(1/b)

print(d)

floor(d)

ceiling(d)

trunc(d)

round(d)

#####MATRIX

x+y

x-y

x\*y

x%\*%y

t(x)

det(x)

crossprod(x)

t(x)%\*%x