Name:Yogeshree Chandankhede

PRN: 52

#1. Write a R program to take input from the user (name and age) and display the values.

name<- readline("Enter name")

age<-as.integer(readline("enter age"))

print(paste("Name: ",name,"And Age is",age))

#2. Write a R program to print the numbers from 1 to 100 and print "Fizz" for

#multiples of 3, print "Buzz" for multiples of 5, and print "FizzBuzz" for

#multiples of both.

for(i in 1:100){

if(i%%3==0 & i%%5==0){

print("FizzBuzz")

}else if(i%%5==0){

print("Buzz")

}else if(i%%3==0){

print("Fizz")

}else{

print(i)

}

}

#3. Write a R program to create an array with three columns, three rows, and

#two "tables", taking two vectors as input to the array. Print the array.

v<- c(1,2,3,4,5,6,7,8)

v1<- c(11,12,13,14,15,16)

?array

Myarray<- array(data=c(v,v1),dim = c(3,3,2))

Myarray

#4. Write a function that takes 3 numbers a, b, and c as inputs and returns the

#smallest number of the three

mysmall <- function(a,b,c){

a<-as.integer(readline("enter a"))

b<-as.integer(readline("enter b"))

c<-as.integer(readline("enter c"))

if(a<b && a<c){

print(paste(a," is small"))

}else if(b<c && b<a){

print(paste(b," is small"))

}else{

print(paste(c," is small"))

}

}

mysmall()

#2nd type

min1 = function(){

#names <- scan(what = integer(),nmax=3)

a=as.integer(readline("enter a:"))

b=as.integer(readline("enter b:"))

c=as.integer(readline("enter c:"))

min=a

if(min>b)

{

min=b

}else if(min >c){

min =c

}

print(paste("min :",min))

}

min1()

#5. Write a function which recursively computes the n’th Fibonacci number.

fibonacci <- function(n) {

if(n==0){

return(0)

}else if(n==1){

return(1)

}else{

return(fibonacci(n-1)+fibonacci(n-2))

}

}

print(fibonacci(5))

#6. Find all primes smaller than 1000.

is\_prime=TRUE

for (number in 2:1000){

is\_prime=TRUE

for (i in 2:(number-1)) {

if(number%%i==0)

is\_prime=FALSE

}

if(is\_prime){print(number)}

}

#7. Print the square root of the numbers from 1 to 1000.

for(i in 1:1000){

print(sqrt(i))

}

#2nd type

num<- 1:1000

squareroot<- sqrt(num)

print(squareroot)

#8. Give the R code required to produce this list:

a<- c(1,2,3,4,5)

a

b<-c("a","b")

b

c <- matrix(1:6, nrow = 2)

c

#10.Create a user defined function from the user which will take vector from

#the user and print its mean

meanvec <- function(){

vec<- scan(what = numeric())

res<- mean(vec)

cat("Mean of vector",res)

}

meanvec()

#11.Create a user define function which will take Principal, Rate of interest,

#Duration from the user and calculate Simple Interest and Compound Interest

interest\_calc <- function() {

P <- as.numeric(readline("Enter Principal amount: "))

R <- as.numeric(readline("Enter Rate of Interest (%): "))

T <- as.numeric(readline("Enter Duration (years): "))

SI <- (P \* R \* T) / 100

CI <- P \* (1 + R / 100)^T - P

cat("Simple Interest is:", SI, "\n")

cat("Compound Interest is:", CI, "\n")

}

interest\_calc()

#12.Create a list which has dataframe, matrix & vector and access every

#element from that list.

v<- c(1,2,3,4,5,6)

v

mymatrix <- matrix(1:9, nrow = 3)

mymatrix

df<- data.frame(name=c("A","B","C"),

age=c(21,22,23))

df

mylist= list(v,mymatrix,df)

mylist

mylist[1]

mylist[2]

mylist[3]