R programming basics

K Sandhya Susmistha

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1) Branching statements in R programming.

x <- 5

y <- 6

if (x>y) {

print("x is greater than y")

} else if(x==y){

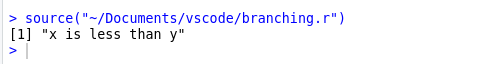
print("x and y are equal")

}else{

print("x is less than y")

}

Output:



2) Looping statements in R

#while

i<-1

print("while loop")

while(i<6){

print(i)

i<-i+1

}

#for

print("for loop")

for(i in 1:5){

print(i)

}

#repeat

i<-1

print("repeat")

repeat{

print(i)

i<-i+1

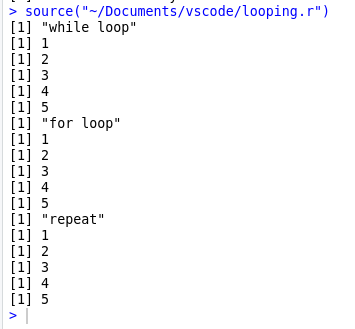
if(i>5){

break

}

}

Output:



3) Create two dataframes for Batch 1 and Batch 2 with reg.no, grade, name and cgpa and combine them

* Append one more field class as categorial value

batch1 <- data.frame(

reg\_no = c(3001,3002,3003,3004,3005),

stu\_name = c("a","b","c","d","e"),

cgpa = c(9.1,9.3,9.2,9.2,9.5)

)

# batch1

print("batch1")

print(batch1)

grades <- c("a","a+","a","a","o")

batch1 <- cbind(batch1,grades)

print("Adding grades column")

print(batch1)

print("batch2")

batch2 <- data.frame(

reg\_no = c(3501,3502,3503,3504,3505),

stu\_name = c("a","b","c","d","e"),

cgpa = c(9.1,9.3,5.2,9.2,9.5)

)

#batch2

print(batch2)

grades <- c("a","a+","a","a","o")

batch2 <- cbind(batch2,grades)

print(batch2)

batch\_info <- rbind(batch1,batch2)

batch\_info

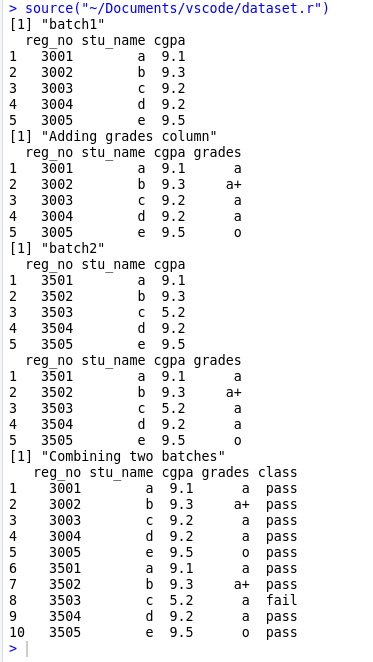
batch\_info$class <- as.factor(ifelse(batch\_info$cgpa>=6.0,"pass"

,"fail"))

print("Combining two batches")

print(batch\_info)

Output:



4) Create a list of string, numeric with sid, sname, project domain

* Extract only project domain

stu\_list <- list(c("A","B","C"),c(3001,3002,3003),c("web\_dev","app\_dev","ML"))

print(stu\_list)

names(stu\_list) <- c("stu\_names","stu\_id","proj\_domain")

print("project domain")

print(stu\_list$proj\_domain)

Output:



5) Create a list for eid, ename, designation, salary and company location

* Change designation from manager to ceo
* Append project details between designation and salary
* Remove location information

emp\_data <- list(c(1,2,3),c("a","b","c"),c("Manager","Team\_Lead","Worker"),c(1000,2000,1500),c("Chennai","Banglore","Chennai"))

names(emp\_data) <- c("emp\_id","emp\_name","emp\_desig","emp\_sal","emp\_loc")

print(emp\_data)

# emp\_data

emp\_data <- lapply(emp\_data,function(x) replace(x,x=="Manager","CEO"))

print("changing manger to ceo")

print(emp\_data)

append(emp\_data,c("web","app","ml"),after=3)

print("appending projects")

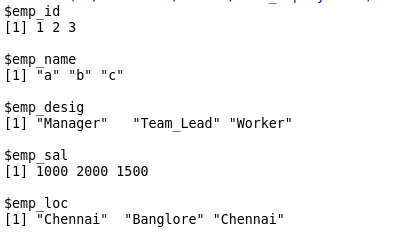
print(emp\_data)

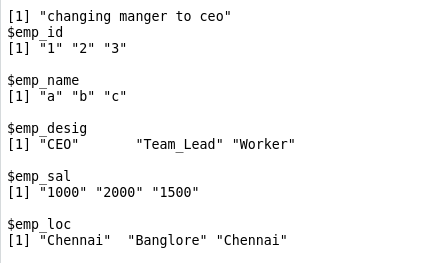
emp\_data[["emp\_loc"]] = NULL

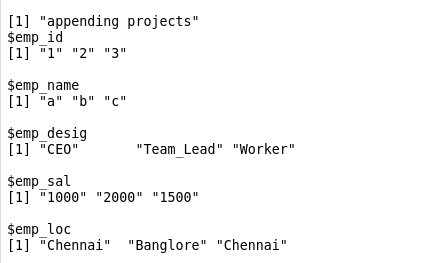
print("removing employee work location")

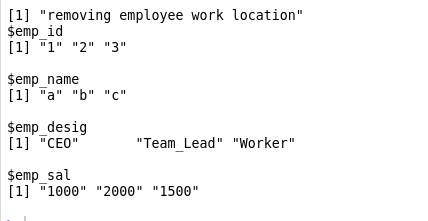
print(emp\_data)

Output:









6) create a vector with string values, numeric values and find vector length, extract 3rd element, extract 1,4,6 elements, remove 1st element, remove 1,3,6 elements and change item at 5th index

#string values

sports <- c("cricket","football","badminton")

print("string vector")

print(sports)

#numbers

a <- 1:10

print("number vector")

print(a)

#length

print("vector length - sports")

print(length(sports))

#indexing

print("indexing of vectors")

print(sports[3])

#multi indexing

print("multi indexing of vectors")

print(a[c(1,4,6)])

#remove first ele

print("removing elements")

a <- a[! a%in% c(1)]

print(a)

a <- a[! a%in% c(1,4,6)]

print(a)

print("assigning values to specific location")

a[5]<-10

print(a)

output:

