PR5

PR5\_201821479\_황혜린

2018년 10월 11일

# 조건문과 반복문

## 1. 반복문

### 1.1 for()

a<-c(1,2,4) ; a

## [1] 1 2 4

for(i in a) print(i)

## [1] 1  
## [1] 2  
## [1] 4

for(i in c(1,2,4))  
 print(i)

## [1] 1  
## [1] 2  
## [1] 4

string=c("test","for","for()")  
for(i in string)  
 print(i)

## [1] "test"  
## [1] "for"  
## [1] "for()"

for(i in c("test","for","for()"))  
 print(i)

## [1] "test"  
## [1] "for"  
## [1] "for()"

for(i in 1:3)  
 print(i)

## [1] 1  
## [1] 2  
## [1] 3

print("다음줄")

## [1] "다음줄"

print(i+1)

## [1] 4

for(i in 1:3){  
 print(i)  
 print("다음줄")  
 print(i+1)  
}

## [1] 1  
## [1] "다음줄"  
## [1] 2  
## [1] 2  
## [1] "다음줄"  
## [1] 3  
## [1] 3  
## [1] "다음줄"  
## [1] 4

j<-1:6  
for(i in seq(2,6,by=2)){  
 print(paste0(i,"번째 데이터:"))  
 print(j[i])  
}

## [1] "2번째 데이터:"  
## [1] 2  
## [1] "4번째 데이터:"  
## [1] 4  
## [1] "6번째 데이터:"  
## [1] 6

for(a in 1:10)  
 print(a)

## [1] 1  
## [1] 2  
## [1] 3  
## [1] 4  
## [1] 5  
## [1] 6  
## [1] 7  
## [1] 8  
## [1] 9  
## [1] 10

for(i in 1:10){  
 print(i)  
 break  
}

## [1] 1

### 1.2 while()문

i=1  
while(i<5){  
 print(i)  
 i=i+1  
}

## [1] 1  
## [1] 2  
## [1] 3  
## [1] 4

### 1.3 repeat

i<-1  
repeat{  
 i<-i+30  
 if(i>100)break  
 print(i)  
}

## [1] 31  
## [1] 61  
## [1] 91

# 2. 조건문

## 2.1 if문과 if-else문

x=80  
if(x<=90) print("B")

## [1] "B"

if(x<=80) print("C")

## [1] "C"

x<-91  
if(x>90){  
 print("B")  
 x=x+10  
 print(x)  
}

## [1] "B"  
## [1] 101

x<-91  
if(x<=90) print("B") else print("C")

## [1] "C"

if(x<90){  
 print("B")  
 x=x+10  
}else{  
 print("C")  
}

## [1] "C"

x<-100  
if(x<70){  
 print("F")  
}else if(x<80) {  
 print("C")  
}else if(x<90) {  
 print("B")  
}else {  
 print("A")  
}

## [1] "A"

## 2.2 ifelse

x=10  
ifelse(x>5,x+5,x-5)

## [1] 15

# 3. 조건문과 반복문 함께 사용하기

x<-1:10  
for(i in x){  
 if(i%%2==0){  
 print(i)  
 }   
}

## [1] 2  
## [1] 4  
## [1] 6  
## [1] 8  
## [1] 10

# 연습문제

## 문제1

vec <- NULL #vec에 NULL할당   
for(i in (1:100)){  
  
 vec<- append(vec, paste0("https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=",i))   
} #paste0를 통해 링크에 1,2,3..숫자를 부여하고, vec에 append를 사용해 원소(링크)를 1~100까지 대응시킵니다   
print(vec) #vec출력!

## [1] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=1"   
## [2] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=2"   
## [3] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=3"   
## [4] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=4"   
## [5] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=5"   
## [6] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=6"   
## [7] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=7"   
## [8] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=8"   
## [9] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=9"   
## [10] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=10"   
## [11] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=11"   
## [12] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=12"   
## [13] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=13"   
## [14] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=14"   
## [15] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=15"   
## [16] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=16"   
## [17] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=17"   
## [18] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=18"   
## [19] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=19"   
## [20] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=20"   
## [21] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=21"   
## [22] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=22"   
## [23] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=23"   
## [24] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=24"   
## [25] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=25"   
## [26] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=26"   
## [27] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=27"   
## [28] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=28"   
## [29] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=29"   
## [30] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=30"   
## [31] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=31"   
## [32] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=32"   
## [33] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=33"   
## [34] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=34"   
## [35] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=35"   
## [36] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=36"   
## [37] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=37"   
## [38] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=38"   
## [39] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=39"   
## [40] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=40"   
## [41] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=41"   
## [42] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=42"   
## [43] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=43"   
## [44] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=44"   
## [45] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=45"   
## [46] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=46"   
## [47] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=47"   
## [48] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=48"   
## [49] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=49"   
## [50] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=50"   
## [51] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=51"   
## [52] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=52"   
## [53] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=53"   
## [54] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=54"   
## [55] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=55"   
## [56] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=56"   
## [57] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=57"   
## [58] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=58"   
## [59] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=59"   
## [60] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=60"   
## [61] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=61"   
## [62] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=62"   
## [63] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=63"   
## [64] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=64"   
## [65] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=65"   
## [66] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=66"   
## [67] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=67"   
## [68] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=68"   
## [69] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=69"   
## [70] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=70"   
## [71] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=71"   
## [72] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=72"   
## [73] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=73"   
## [74] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=74"   
## [75] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=75"   
## [76] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=76"   
## [77] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=77"   
## [78] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=78"   
## [79] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=79"   
## [80] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=80"   
## [81] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=81"   
## [82] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=82"   
## [83] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=83"   
## [84] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=84"   
## [85] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=85"   
## [86] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=86"   
## [87] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=87"   
## [88] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=88"   
## [89] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=89"   
## [90] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=90"   
## [91] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=91"   
## [92] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=92"   
## [93] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=93"   
## [94] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=94"   
## [95] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=95"   
## [96] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=96"   
## [97] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=97"   
## [98] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=98"   
## [99] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=99"   
## [100] "https://movie.daum.net/moviedb/grade?movieId=95554&type=netizen&page=100"

## 문제2

for (x in 2) {  
 for (y in 1:9) {  
 print(paste(x,"\*",y,"=",x\*y))  
 }  
}

## [1] "2 \* 1 = 2"  
## [1] "2 \* 2 = 4"  
## [1] "2 \* 3 = 6"  
## [1] "2 \* 4 = 8"  
## [1] "2 \* 5 = 10"  
## [1] "2 \* 6 = 12"  
## [1] "2 \* 7 = 14"  
## [1] "2 \* 8 = 16"  
## [1] "2 \* 9 = 18"

#x에 2, y에 1~9 를 넣고 수식을 만들고 paste!

## 문제3- 1

a<-0  
for(i in 1:1000){   
 if(i%%10==3){ #일의 자리 수 이상의 3이 들어가는 수  
 a<-a+1}   
 if((i%/%10)%%10==3){ #십의 자리 수 이상의 3이 들어가는 수  
 a<-a+1}  
 if((i%/%100)%%10==3){ #백의 자리 수 이상의 3이 들어가는 수  
 a<-a+1}  
   
}  
print(a) #3이 들어있는 수가 세어져 축적된 a값 출력

## [1] 300