

Jeffrey_exercise2_hw1

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##-----## R code for Data Science for Beginners Day 2: Exercises
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Task 1. if...else function

Mary and John's family seating for movie

```
movies_seats <- 1:10 for (seat in movies_seats) { if (seat >= 1 && seat<= 5) { message(paste("seat",  
seat, "is assigned to Mary's family.)) } else if (seat >= 6 && seat <= 10) { message(paste("seat", seat, "is  
assigned to John's family.)) } } # movie seats have been assigned
```

Task 1-2.

Mixing up the family members

```
for (seat in movies_seats) { if (seat >= 1 && seat <= 5) { # for seats 1-5, alternate between Mary and  
John's family if (seat %% 2 == 1) { message(paste("seat", seat, "is assigned to Mary's family.)) } else {  
message(paste("seat", seat, "is assigned to John's family.)) } } else if (seat >= 6 && seat <= 10) { # for  
seats 6-10, alternate between John's and Mary's family if (seat %% 2 == 0) { message(paste("seat", seat, "is  
assigned to John's family.)) } else { message(paste("seat", seat, "is assigned to Mary's family.)) } } } #  
family members successfully mixed together
```

Task 2. loop

2-1. Printing Years from 2012 - 2022

```
years <- 2012:2022 for (year in years) { message(paste("year", year,)) } # years from 2012 to 2022 successfully  
printed
```

2-2. Loop with complete sentence

```
for (year in years) { sentence <- paste("the year is", year) message(paste(sentence,)) } # sentences successfully  
printed
```

2-3. Exclude 2020 and 2021 due to COVID-19

```
for (year in years) { #skip the years 2020 and 2021 if (year == 2020 || year == 2021) { next } sentence <-  
paste("The year is", year) message(paste(sentence,)) } # successfully excluded the COVID-19 years from  
the loop
```

Task 3. functions

```
add_ten <- function(x) { result <- x + 10 return(result) } # created function that always adds 10 add_ten(3)
add_ten(10) # function works properly # 3.2 find missing values within a vector identify_missing_values
<- function(vector) { missing_indices <- which(is.na(vector)) if (length(missing_indices) == 0) { mes-
sage(paste("there are no missing values in the vector. ")) } else { for (index in missing_indices) { mes-
sage(paste("missing values found at position", index, "in the vector. ")) } } } # set up if else function to
identify missing values vector <- c(1,NA, 3, NA)
# created vector containing missing values identify_missing_values(vector) # missing values found at position
2 and position 4
```