```
---
title: "chapter2 Functions Lab B"
author: "Odlin Montila"
output: html_document
---
```

Remember to change the `author: ` field on this Rmd file to your own name.

For the first two problems we'll use the Cars93 data set from the MASS library.

```{r}
library(MASS)
x<-Cars93
```

1. Manipulating data frames

Use the `transform()` and `log()` functions to create a new data frame called `Cars93.log` that has `MPG.highway` and `MPG.city` replaced with `log(MPG.highway)` and `log(MPG.city)`.

```{r}
Cars93.log<-
transform(Cars93,MPG.highway=log(MPG.highway),MPG.city=log(MPG.city))
```

2. Table function

Use the `table()` function to tabulate the data by DriveTrain and Origin.

```{r}
table(x$DriveTrain,x$Origin)
```

3. Functions, lists, and if-else practice

(a) Write a function called `isPassingGrade` whose input `x` is a number, and which returns `FALSE` if `x` is lower than 50 and `TRUE` otherwise.

```{r}
isPassingGrade<- funtion(x){
  if (x<50)
    y<-"TRUE"{
      else if (x>50)
        Y<-"F"


    }


}
```

```
isPassingGrade(40)
```

(b) Write a function called `sendMessage` whose input `x` is a number, and which prints `Congratulations` if `isPassingGrade(x)` is `TRUE` and prints `Oh no!` if `isPassingGrade(x)` is `FALSE`.

```{r}
# Edit me
```

(c) Write a function called `gradeSummary` whose input `x` is a number. Your function will return a list with two elements, named `letter.grade` and `passed`. The letter grade will be `"A"` if `x` is at least `90`. The letter grade will be `"B"` if `x` is between `80` and `90`. The letter grade will be `"F"` if `x` is lower than `"80"`. If the student's letter grade is an A or B, `passed` should be TRUE; `passed` should be FALSE otherwise.

```{r}
# Edit me
```

To check if your function works, try the following cases:

`x = 91` should return
```{r, echo = FALSE}
list(letter.grade = "A", passed = TRUE)
```

`x = 62` should return
```{r, echo = FALSE}
list(letter.grade = "F", passed = FALSE)
```