

Chapter 3 - Data Transformation with dplyr

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Exercise 1

Upload packages

```
library(dplyr)
library(nycflights13)
```

Upload database

```
data<-nycflights13::flights

View(data)
```

1. Brainstorm as many ways as possible to select dep_time, dep_delay, arr_time, and arr_delay from flights.

```
sel1<- data %>%
  select(dep_time, dep_delay, arr_time,arr_delay)

sel1
```

```
## # A tibble: 336,776 x 4
##   dep_time dep_delay arr_time arr_delay
##   <int>     <dbl>   <int>     <dbl>
## 1      517         2     830         11
## 2      533         4     850         20
## 3      542         2     923         33
## 4      544        -1    1004        -18
## 5      554        -6     812        -25
## 6      554        -4     740         12
## 7      555        -5     913         19
## 8      557        -3     709        -14
## 9      557        -3     838         -8
## 10     558        -2     753          8
## # ... with 336,766 more rows
```

Utilizing the starts_with() function:

```
sel2<- data %>%
  select(starts_with("dep_"),
         starts_with("arr_"))

sel2
```

```
## # A tibble: 336,776 x 4
##   dep_time dep_delay arr_time arr_delay
##   <int>     <dbl>   <int>     <dbl>
## 1      517         2     830         11
## 2      533         4     850         20
## 3      542         2     923         33
## 4      544        -1    1004        -18
## 5      554        -6     812        -25
## 6      554        -4     740         12
## 7      555        -5     913         19
## 8      557        -3     709        -14
## 9      557        -3     838         -8
## 10     558        -2     753          8
## # ... with 336,766 more rows
```

Utilizing the `:` operator:

```
sel3<- data %>%
  select(dep_time, dep_delay:arr_time, arr_delay)

sel3
```

```
## # A tibble: 336,776 x 4
##   dep_time dep_delay arr_time arr_delay
##   <int>     <dbl>   <int>     <dbl>
## 1      517         2     830         11
## 2      533         4     850         20
## 3      542         2     923         33
## 4      544        -1    1004        -18
## 5      554        -6     812        -25
## 6      554        -4     740         12
## 7      555        -5     913         19
## 8      557        -3     709        -14
## 9      557        -3     838         -8
## 10     558        -2     753          8
## # ... with 336,766 more rows
```