

Lab 8

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December 05, 2016

1. Load the dataframes `sprint.m.fastest.csv` and `sprint.w.fastest.csv`.

```
sprint.m.fastest <- read.csv("sprint.m.fastest.csv", header = T, as.is = T)
sprint.w.fastest <- read.csv("sprint.w.fastest.csv", header = T, as.is = T)
```

2. First find the common track meets between the two data frames, i.e. the common entries in `CityDate`.

```
common.meets <- intersect(sprint.m.fastest$CityDate, sprint.w.fastest$CityDate)
```

3. Now compute the rows of each dataframe that correspond to these common track meets.

```
ind.m <- which(is.element(sprint.m.fastest$CityDate, common.meets))
ind.w <- which(is.element(sprint.w.fastest$CityDate, common.meets))
```

4. Now create a new dataframe that merges the columns of `sprint.m.fastest` with `sprint.w.fastest` and arrange it so that the dataframe only has three columns: `MensTime`, `WomensTime`, and `CityDate` (the common track meet). Display the first five rows.

```
sprint <- cbind(MensTime = sprint.m.fastest$Time[ind.m],
               WomensTime = sprint.w.fastest$Time[ind.w],
               CityDate = common.meets)
head(sprint, 5)
```

```
##      MensTime WomensTime CityDate
## [1,] "10.07"  "10.99"    "Ad-Dawhah 07.05.1998"
## [2,] "10"     "10.93"    "Ad-Dawhah 08.05.2009"
## [3,] "10.01"  "10.93"    "Ad-Dawhah 09.05.2008"
## [4,] "9.87"   "10.92"    "Ad-Dawhah 11.05.2012"
## [5,] "10.08"  "11.01"    "Ad-Dawhah 15.05.2002"
```

```
all(sprint.m.fastest$CityDate[ind.m]==sprint.w.fastest$CityDate[ind.w])
```

```
## [1] TRUE
```

5. Get the same result as 1-4 using `merge()`.

```
sprint2 <- merge(sprint.m.fastest, sprint.w.fastest, by="CityDate")
sprint2 <- data.frame(MensTime = sprint2$Time.x,
                     WomensTime = sprint2$Time.y,
                     sprint2$CityDate)
all(sprint2 == sprint)
```

```
## [1] TRUE
```