Week 9 Project

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Due March 24, 2020

Libraries

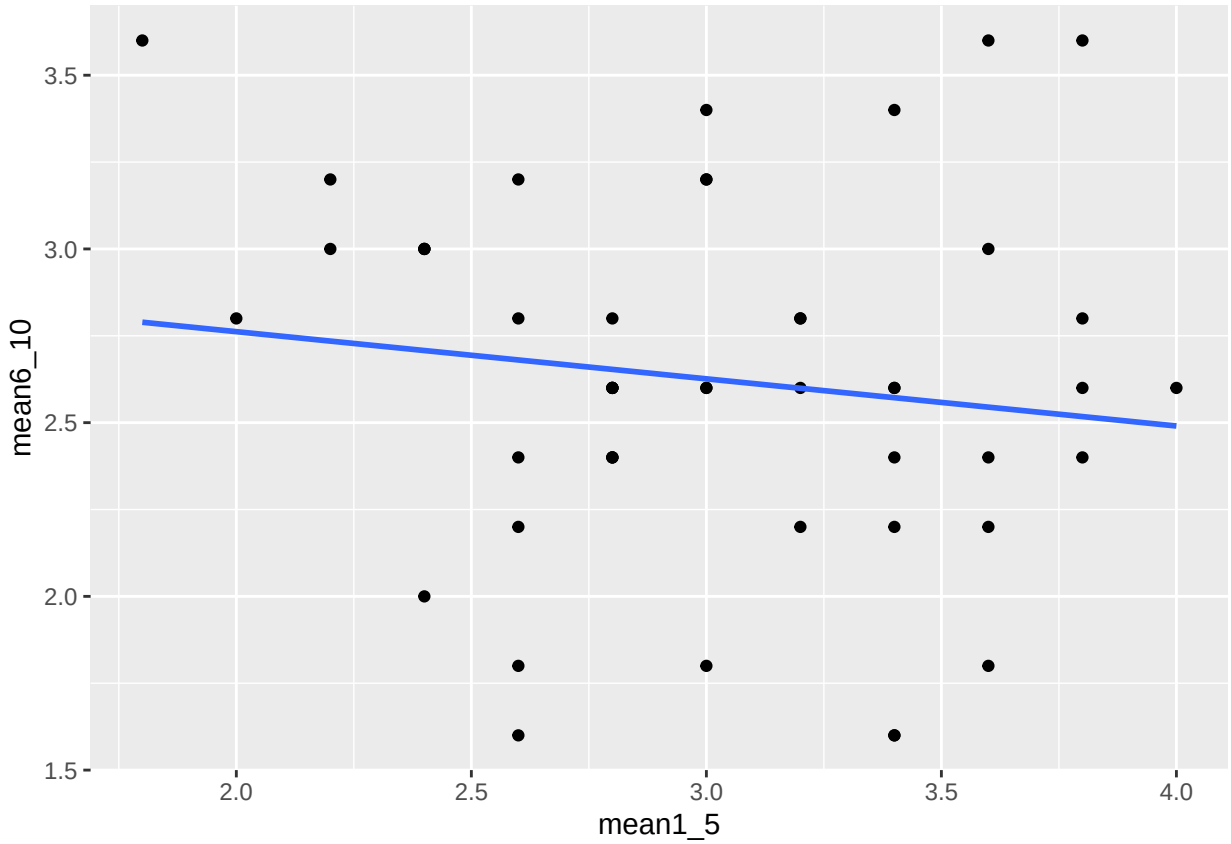
Data Import

```
week9_tbl <- read_csv("../data/week3.csv") %>%
              mutate(timeStart = ymd_hms(timeStart),
                     timeEnd = ymd_hms(timeEnd),
                     condition = factor(condition,
                                        levels = c("A", "B", "C"),
                                        labels = c("Block A", "Block B", "Control")),
                     gender = factor(gender,
                                     levels = c("M", "F"),
                                     labels = c("Male", "Female")),
                     mean1_5 = (q1 + q2 + q3 + q4 + q5)/5,
                     mean6_10 = (q6 + q7 + q8 + q9 + q10)/5)
```

```
## Parsed with column specification:
## cols(
##   timeStart = col_character(),
##   timeEnd = col_datetime(format = ""),
##   condition = col_character(),
##   gender = col_character(),
##   q1 = col_double(),
##   q2 = col_double(),
##   q3 = col_double(),
##   q4 = col_double(),
##   q5 = col_double(),
##   q6 = col_double(),
##   q7 = col_double(),
##   q8 = col_double(),
##   q9 = col_double(),
##   q10 = col_double()
## )
```

- changed timeStart and timeEnd to POSIXct format
- created factors for condition and gender
- calculated mean score on questions 1 - 5
- calculated mean score on questions 6 - 10

Data Visualization



The plot shows the relationship between the mean score on questions 1 through 5 and the mean score on questions 6 through 10 where each point represents an individual and the line is the OLS regression line.

Analysis

```
r <- cor.test(week9_tbl$mean1_5, week9_tbl$mean6_10)
r
```

```
##
##  Pearson's product-moment correlation
##
## data:  week9_tbl$mean1_5 and week9_tbl$mean6_10
## t = -0.94464, df = 47, p-value = 0.3497
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  -0.4022565  0.1504724
## sample estimates:
##        cor
## -0.1364998
```

The correlation was -0.14 (p=0.35), which is not statistically significant.