Unit 12 HW: The Classical Linear Model Q1.2

#Loading in the data

```
videos <- read_delim("videos.txt", delim = "\t")
videosfilteredout <- videos %>% filter(!is.na(videos$views))

#glimpse(videosfilteredout)
#summary(videosfilteredout)
```

#creating the model

```
#model_one <- lm(mpg ~ disp + hp + wt + drat, data = mtcars)
videos_model <-lm(log(views) ~ rate + length, data=videosfilteredout)

videos_modelnotfitted <-lm(views ~ rate + length, data=videosfilteredout)
```

- Q1.2 No Perfect Collinearity

  To evaluate collinearity, we can look at our coefficients, and notice that R has not dropped any variables.

```
videos_model$coefficients
```

```
##  (Intercept)         rate       length
## 5.4109124371 0.4724853515 0.0004680142
```

  This tells us that there is no perfect collinearity between our variables. Perfect collinearity indicates that one data series can be exactly produced through a simple transformation from another. Intuitively, this also makes sense because you wouldn't expect the length of a video to be transformable to rate of a video and vice-versa.

  This assumption also includes the requirement that a BLP exists, which may not happen if there are heavy tails. In this case, though, we don't see any distributions that look like they have unusually low or high values.

  Given the findings above, we believe the IID assumption is not met.