Univariable analysis for rating variable

```{r}
model.rating <- glm(online_only ~ rating, family = binomial, data = sephora)
sum_model.rating <- summary(model.rating)
sum_model.rating
```

```
Call:
glm(formula = online_only ~ rating, family = binomial, data = sephora)

Coefficients:
            Estimate Std. Error z value Pr(>|z|)
(Intercept) -0.90287    0.19405  -4.653 3.27e-06 ***
rating      -0.08333    0.04626  -1.801   0.0717 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

    Null deviance: 9138.7  on 8615  degrees of freedom
Residual deviance: 9135.5  on 8614  degrees of freedom
  (371 observations deleted due to missingness)
AIC: 9139.5

Number of Fisher Scoring iterations: 4
```

Wald test for rating

```{r}

# Wald test

wald_rating <- round(sum_model.rating$coefficients[2]/

sum_model.rating$coefficients[2,2],3)



pvalue_rating <- round(2*(pnorm(wald_rating)),4)

```

$$H_0 : \beta_1 = 0$$

$$W = \frac{\hat{\beta}_1}{\hat{SE}(\hat{\beta}_1)} = -1.801$$

$$P\_value = 0.0717$$

According to the Wald test, the independent variable “rating” is statistically significant because its p-values is less than the significant level $\alpha=0.25$