Trabalhando com GGplot2

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GGPLOT2

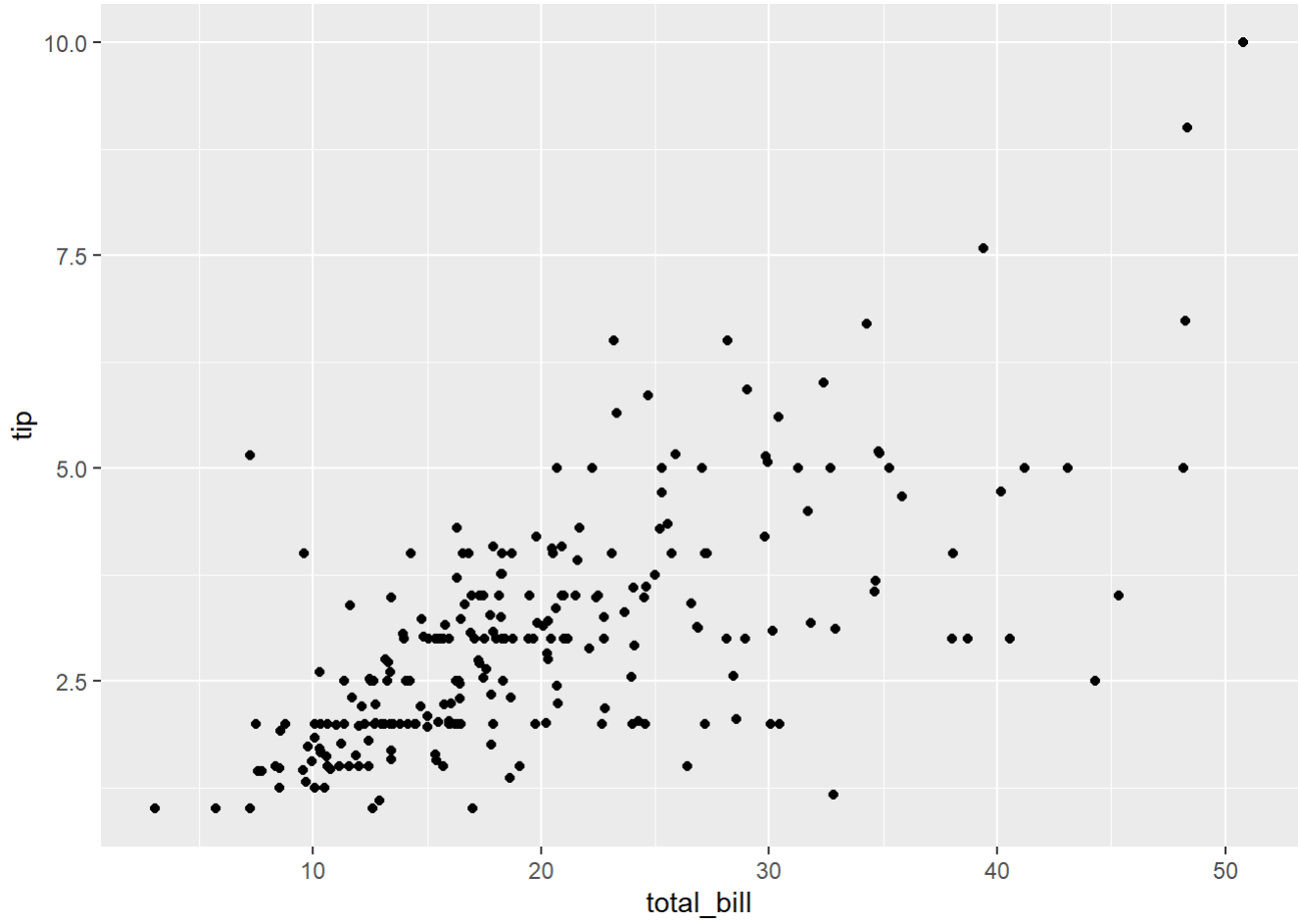
Pacote da linguagem *R* para visualizacao de dados

Instalando o pacote

```
library(ggplot2)
```

Plotando um grafico basico

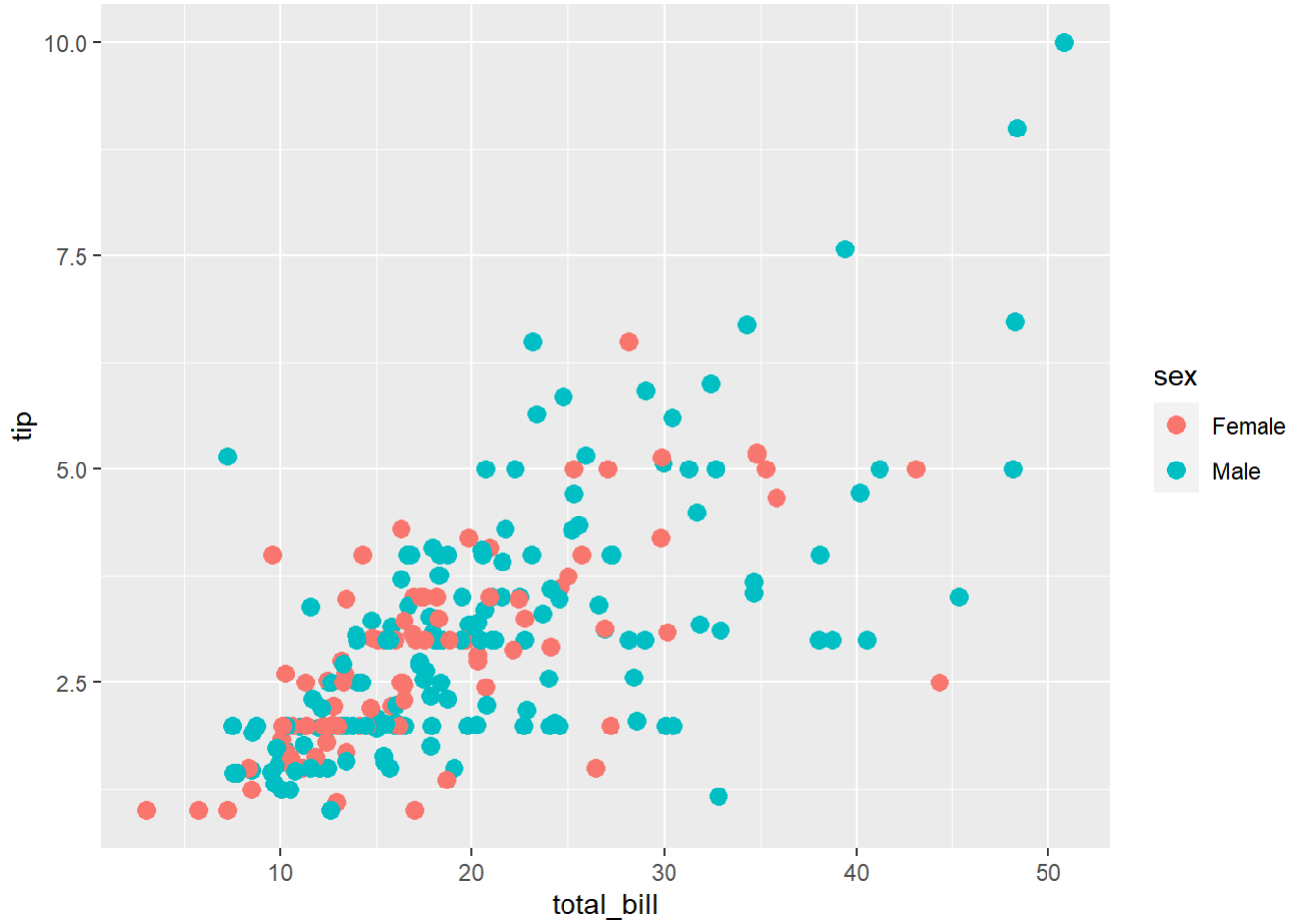
```
data(tips, package = 'reshape2')
qplot(total_bill, tip, data=tips, geom = "point")
```



Criando camadas

Camada 1

```
camada1 = geom_point(mapping = aes(x=total_bill, y=tip, color=sex), data = tips,
                     size=3)
ggplot() + camada1
```



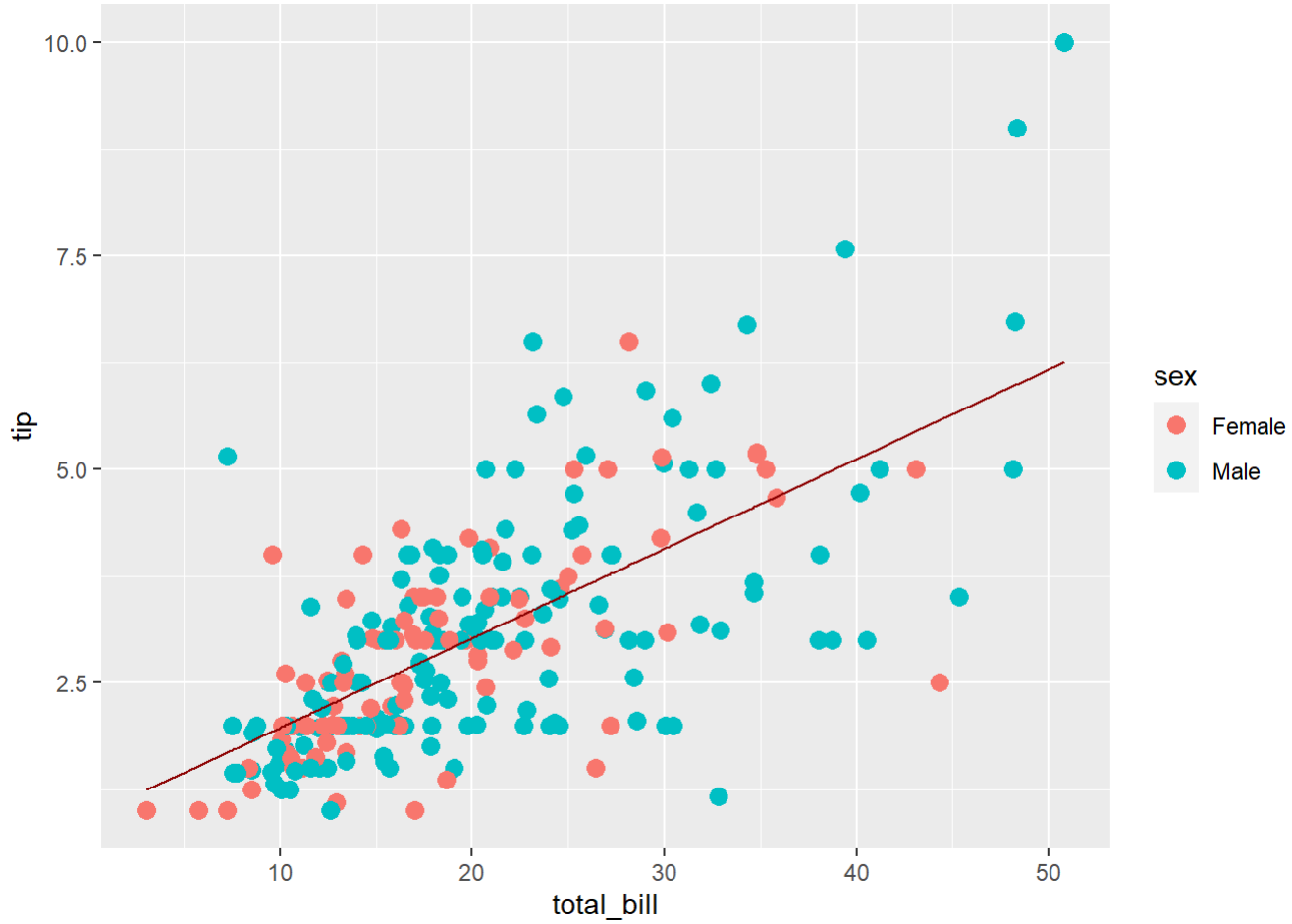
Construindo um modelo de regressao

```
modelo_base = lm(tip~total_bill, data=tips)
modelo_fit = data.frame(total_bill=tips$total_bill,
                        predict(modelo_base,interval="confidence"))

head(modelo_fit)
```

```
##   total_bill      fit      lwr      upr
## 1      16.99 2.704636 2.569519 2.839753
## 2      10.34 2.006223 1.818101 2.194345
## 3      21.01 3.126835 2.996732 3.256937
## 4      23.68 3.407250 3.266528 3.547972
## 5      24.59 3.502822 3.356301 3.649344
## 6      25.29 3.576340 3.424725 3.727955
```

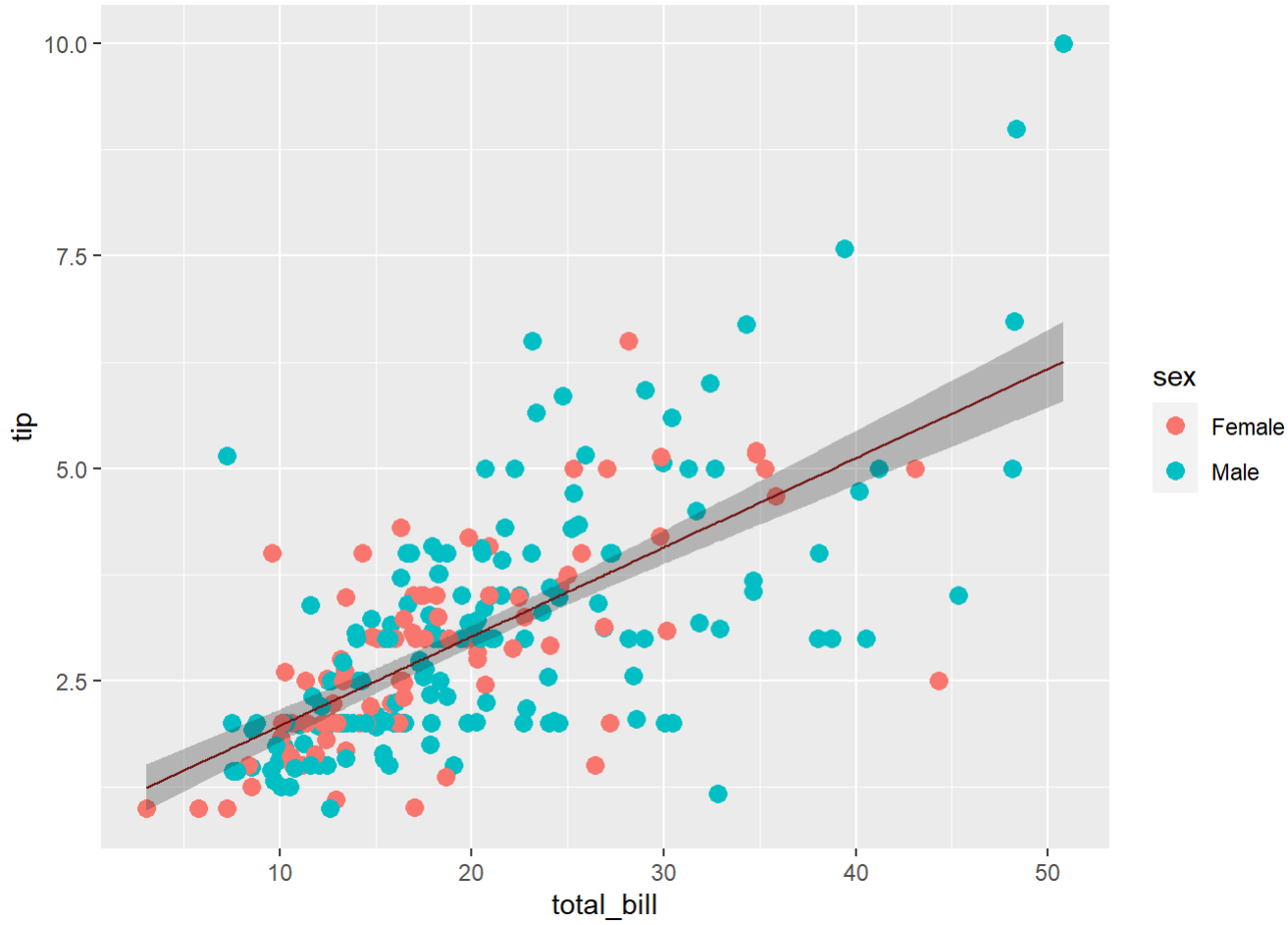
Camada 2

```
camada2 = geom_line(mapping=aes(x=total_bill, y=fit),
                    data=modelo_fit, color='darkred')

ggplot() + camada1 + camada2
```



Camada 3

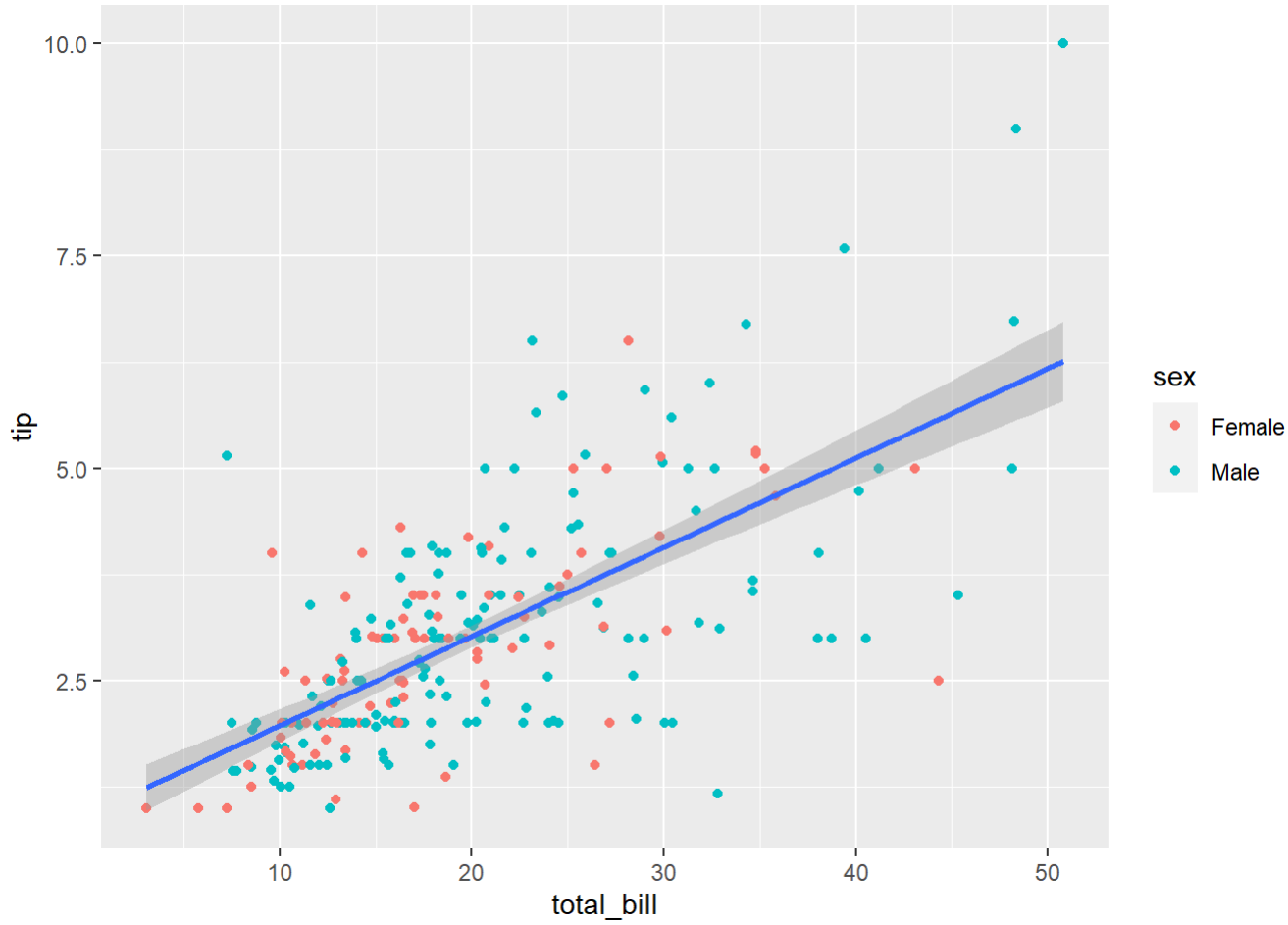
```
camada3 = geom_ribbon(mapping = aes(x=total_bill, ymin = lwr, ymax = upr),
                      data=modelo_fit, alpha=0.3)

ggplot() + camada1 + camada2 + camada3
```



Versao final otimizada

```
ggplot(tips, aes(x=total_bill, y=tip))+
  geom_point(aes(color=sex))+
  geom_smooth(method = 'lm')
```

```
## `geom_smooth()` using formula 'y ~ x'
```



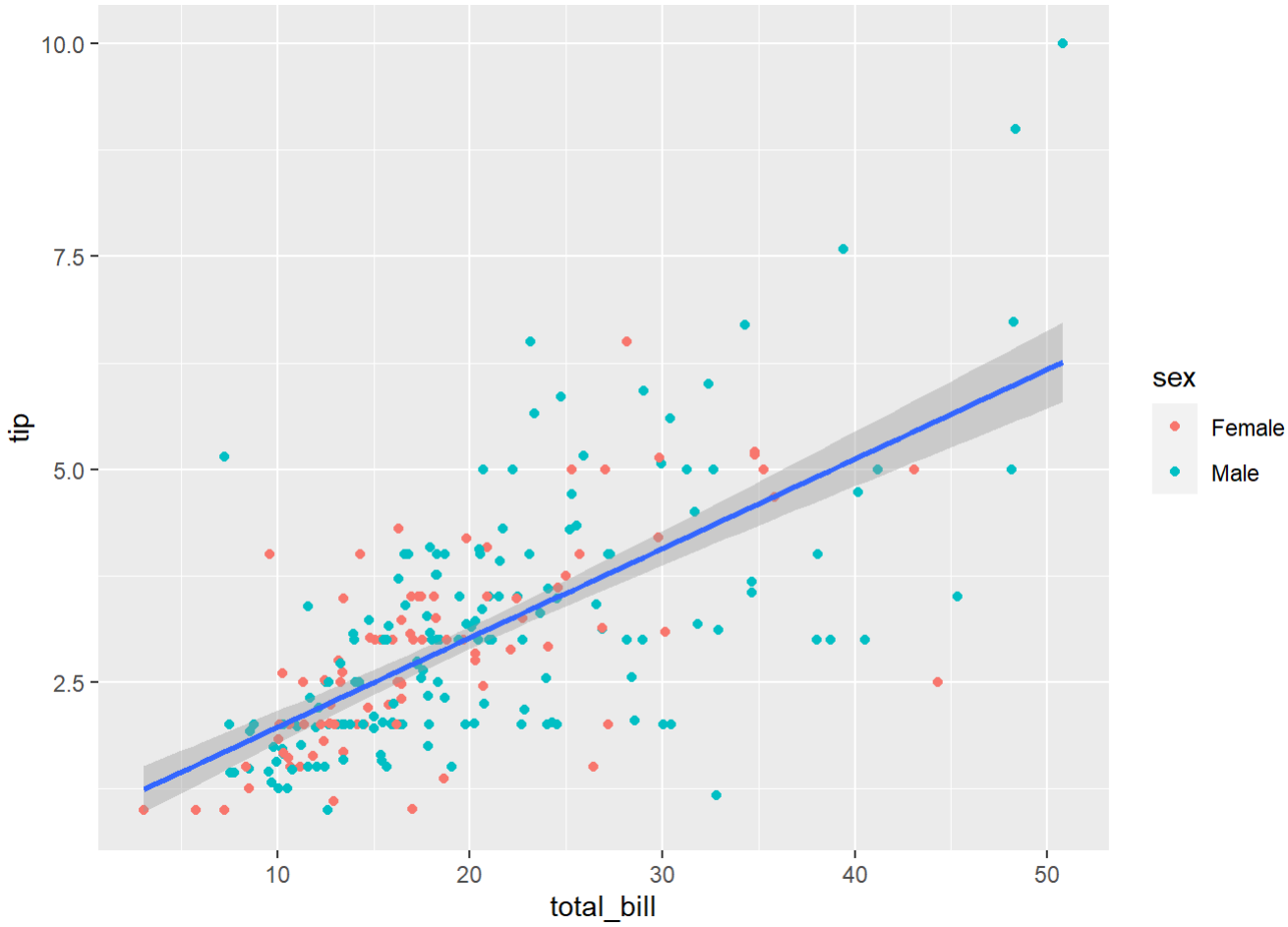
Gravando em um objeto

```
myplot = ggplot(tips, aes(x=total_bill, y=tip))+
  geom_point(aes(color=sex))+
  geom_smooth(method = 'lm')
```

Imprimindo a variavel onde o grafico foi armazenado

```
print(myplot)
```

```
## `geom_smooth()` using formula 'y ~ x'
```



Verificando a classe do objeto

```
class(myplot)
```

```
## [1] "gg"     "ggplot"
```