Question 6

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1.

```r
# create a dataset
set.seed(21)
age <- sample(10:99,200,replace = TRUE)
sex <- factor(sample(c(0,1),200,replace = TRUE),levels = c(0,1),labels = c('Male','Female'))
status <-factor(sample(c(0,1,2),200,replace = TRUE),levels = c(0,1,2),labels = c('Low' , 'Medium','High
bmi <- round(runif(200,min = 14,max = 38),2)

df <- data.frame (age,sex,status,bmi)
head(df)
```
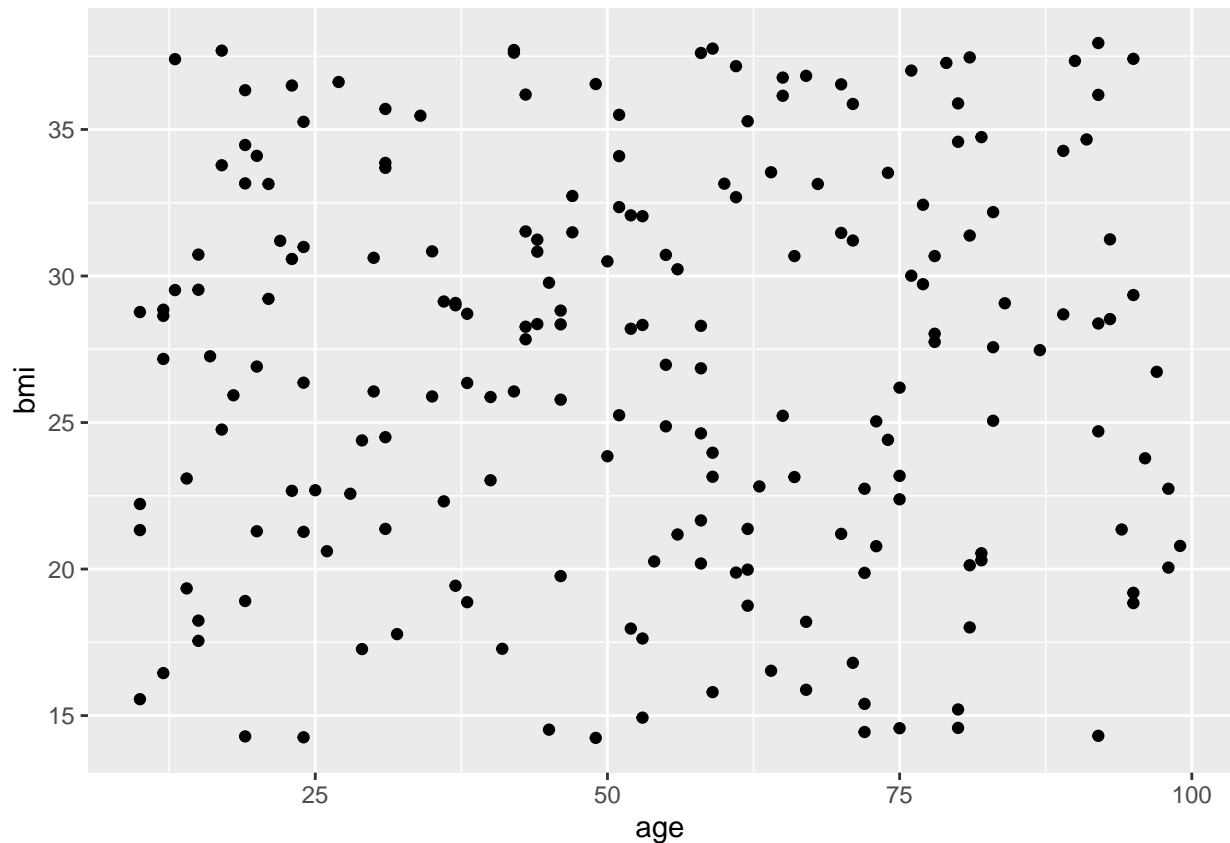
```
##   age    sex status   bmi
## 1  72 Female    Low 22.74
## 2  42 Female   High 26.06
## 3  12   Male Medium 16.45
## 4  66 Female    Low 23.14
## 5  51 Female    Low 32.35
## 6  56 Female    Low 30.23
```

2.

```r
# create a scatterplot

library(ggplot2)
ggplot(data = df,mapping = aes(x = age , y= bmi),col = 'blue')+
  geom_point()
```

Interpretation : By oberving the scatterplot , we can see there is no linear relationship between age and bmi . There is no any correlation between them .

3.

```
#create class
```

4.

```
# create histogram

ggplot(data = df,mapping = aes(x = age))+
    geom_histogram(binwidth = 1,bins = 15)
```