ДОМАШНА РАБОТА ПО СЕМ

Информационни системи 2 курс 2 група

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#Задаване на променливата age

```
> age=c(60,20,42,26,23,20,26,42,26,31,20,26,20,38,42,26,23,53,60,31,23,50,53,42,60)
> age
 [1] 60 20 42 26 23 20 26 42 26 31 20 26 20 38 42 26 23 53 60 31 23 50 53 42 60
```

 # Задаване на променливата gender

```
>gender=c("F","F","M","M","M","M","M","F","F","F","F","F","M","M","F","F","M","M","M","F",
+ "F","F","M","M","F")
> gender
 [1] "F" "F" "M" "M" "M" "M" "M" "F" "F" "F" "F" "F" "M" "M" "F" "F" "M" "M" "M"
[20] "F" "F" "F" "M" "M" "F"
```

 # Задаване на променливата weight

```
>weight=c(50,50,52,61,78,100,78,52,50,61,45,58,50,100,60,58,105,78,100,50,58,61,104,
+ 104,60)
> weight
 [1]  50  50  52  61  78 100  78  52  50  61  45  58  50 100  60  58 105  78 100
[20]  50  58  61 104 104  61
> study = data.frame(age,gender,weight)
> study
```

	age	gender	weight
1	60	F	50
2	20	F	50
3	42	M	52
4	26	M	61
5	23	M	78
6	20	M	100
7	26	M	78
8	42	F	52
9	26	F	50
10	31	F	61
11	20	F	45
12	26	F	58
13	20	M	50
14	38	M	100
15	42	F	60
16	26	F	58
17	23	M	105
18	53	M	78
19	60	M	100
20	31	F	50
21	23	F	58
22	50	F	61
23	53	M	104
24	42	M	104
25	60	F	61

> summary(age) **#Дискриптивна статистика на age**

```
   Min.  1st Qu.  Median    Mean  3rd Qu.    Max. 
  20.00   23.00   31.00      35.32    42.00     60.00 
```

> summary(gender) **# Дискриптивна статистика на gender**

```
   Length     Class         Mode 
      25       character  character 
```

> summary(weight) **# Дискриптивна статистика на weight**

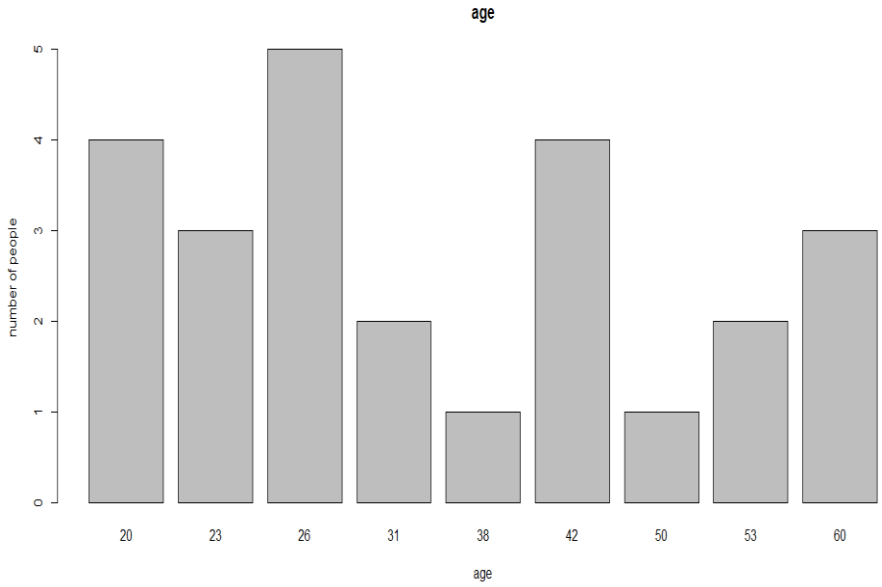
```
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max. 
  45.00   52.00   61.00     68.96   78.00     105.00 
```

> table(age)

```
age
20 23 26 31 38 42 50 53 60 
 4  3  5  2  1  4  1  2  3 
```

#Чертае се графика на age

> barplot(table(age),main="age",xlab="age",ylab="number of people")

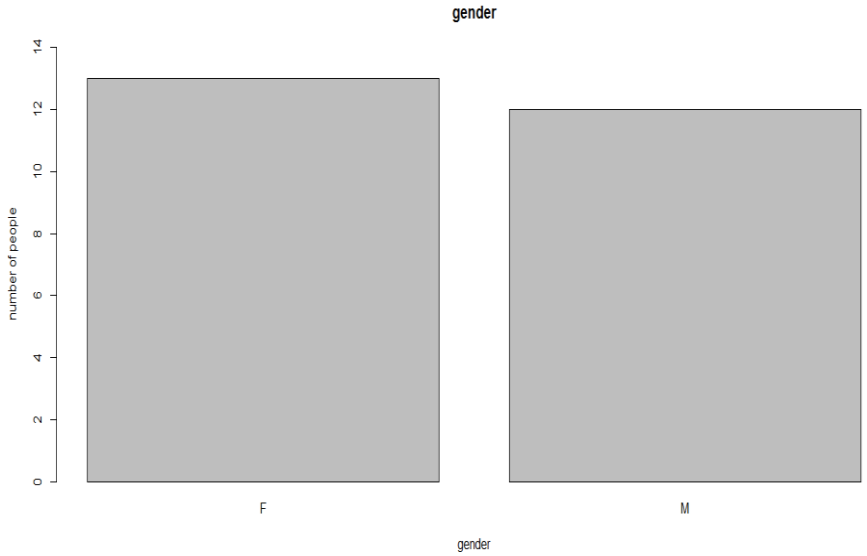


> table(gender)

```
gender
 F  M 
13 12 
```

 # Чертае се графика на gender

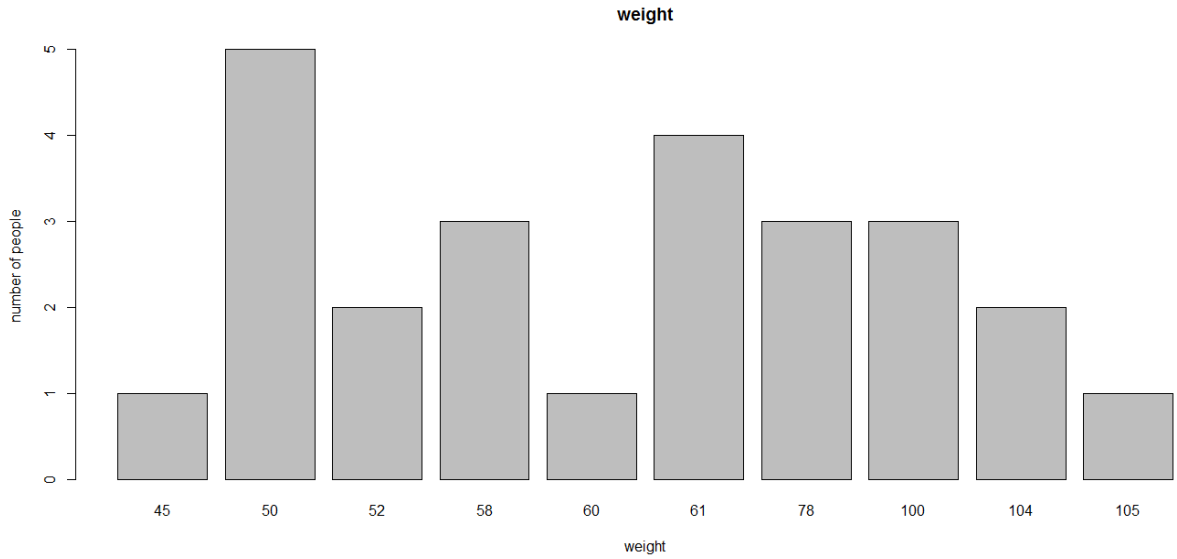
```
> barplot(table(gender),main="gender",xlab="gender",ylab="number of people")
```




```
> table(weight)
height
 45  50  52  58  60  61  78 100 104 105
  1   5   2   3   1   4   3   3   2   1
```

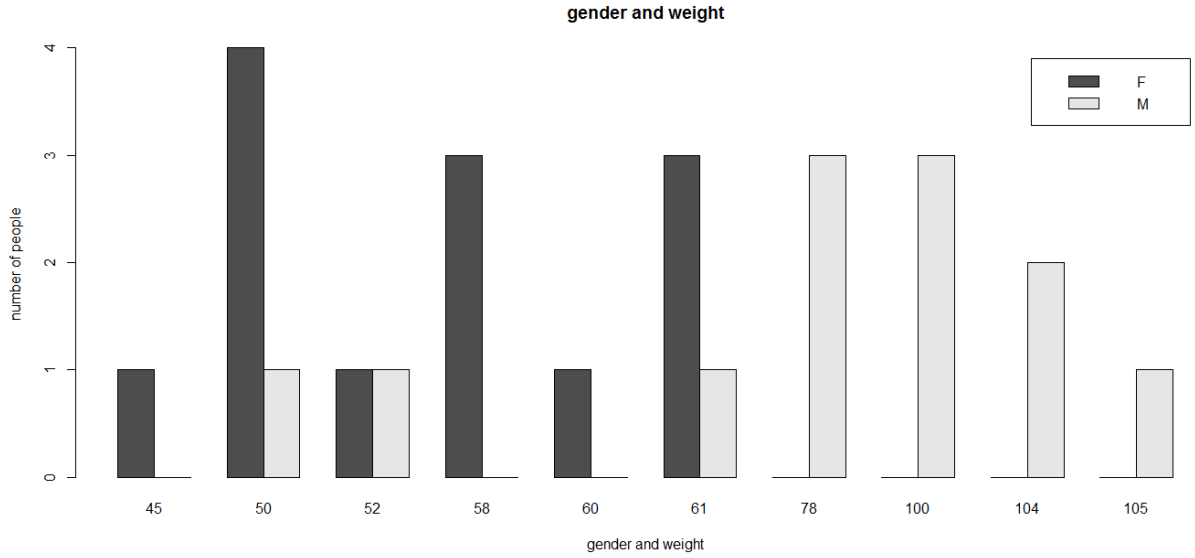
 # Чертае се графика на weight

```
> barplot(table(weight),main="weight",xlab="height",ylab="number of people")
> table(gender,weight)
     weight
gender 45 50 52 58 60 61 78 100 104 105
       F  1  4  1  3  1  3  0   0   0   0
       M  0  1  1  0  0  1  3   3   2   1
```



 # Чертае се графика на gender-weight.Зависимоста между пола и теглото се забелязва в това че мъжете са с поголямо тегло от жените

```
> barplot(table(gender,weight),beside=TRUE,legend.text=T,
+ main="gender and weight",xlab="gender and weight",ylab="number of people")
```




```
> ma=max(age)  #Намира се максималния елемент на age
> ma
[1] 60
> mh=max(weight)  # Намира се максималния елемент на weight
> mh
[1] 105
```

#Извежда номера на индивидите които имат максимални стоиности за age

```
> study[study$age==ma,]
       age  gender weight
1      60     F        50
19    60     M        100
25    60     F        61
```

 # Извежда номера на индивидите които имат максимални стоиности за weight

```
>study[study$weight==mh,]
     Age  gender weight
17   23    M        105
```