

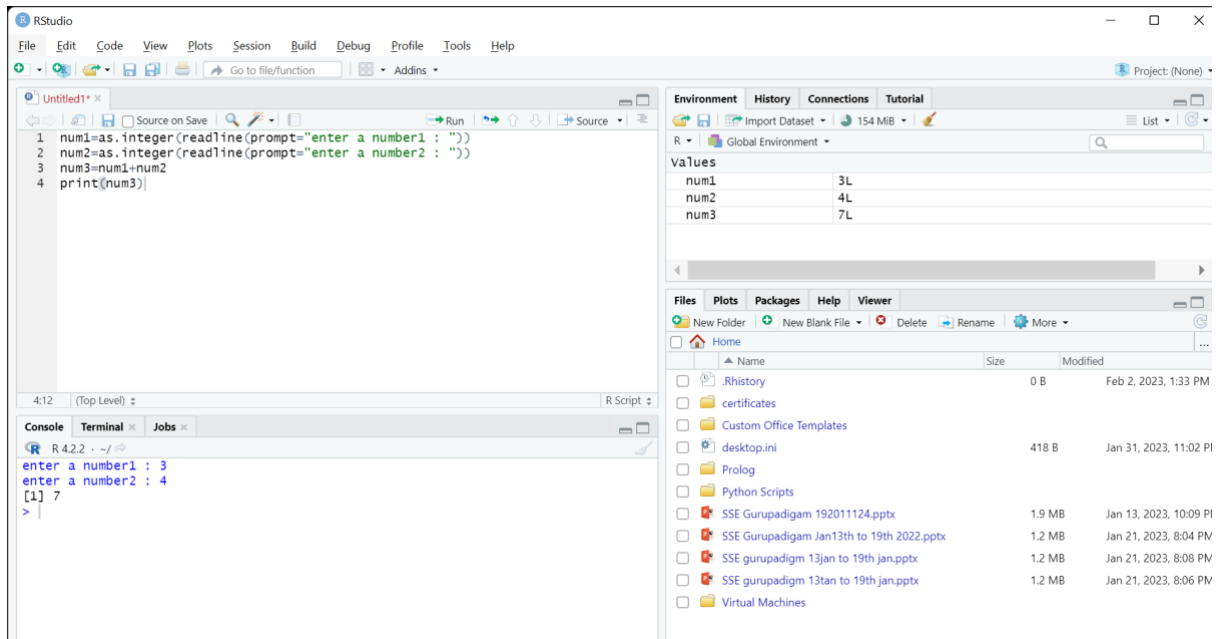
ADDITION:

```
num1=as.integer(readline(prompt="enter a number1 : "))
```

```
num2=as.integer(readline(prompt="enter a number2 : "))
```

```
num3=num1+num2
```

```
print(num3)
```



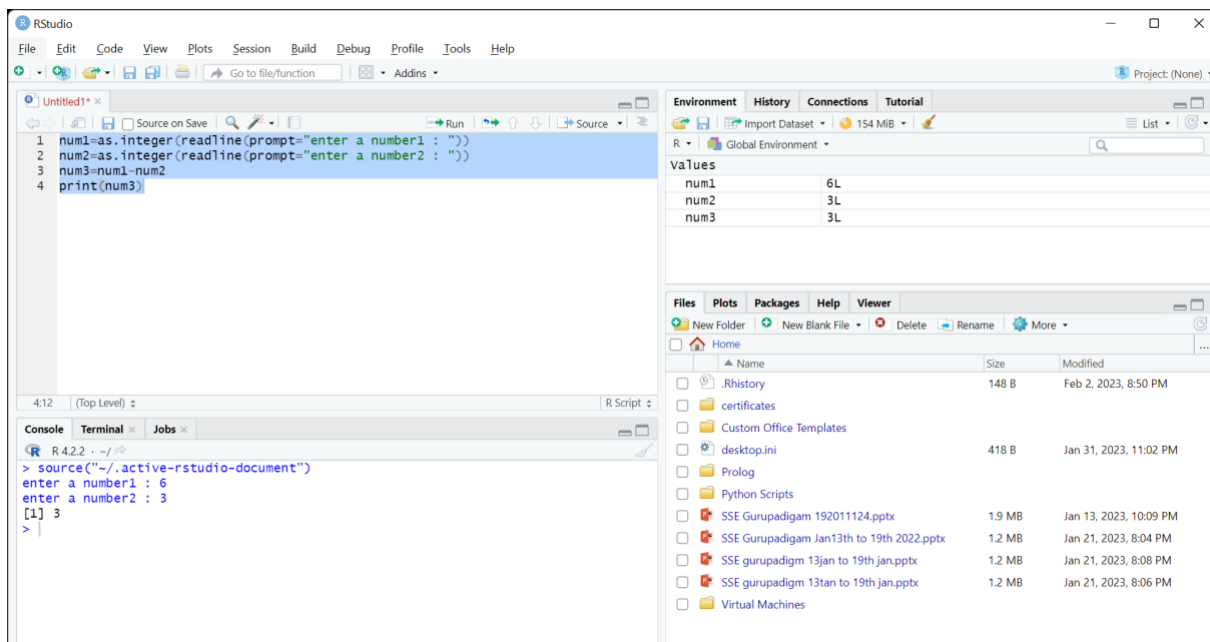
SUBTRACTION:

```
num1=as.integer(readline(prompt="enter a number1 : "))
```

```
num2=as.integer(readline(prompt="enter a number2 : "))
```

```
num3=num1-num2
```

```
print(num3)
```



ODD OR EVEN:

```
num=as.integer(readline(prompt="enter a number : "))
```

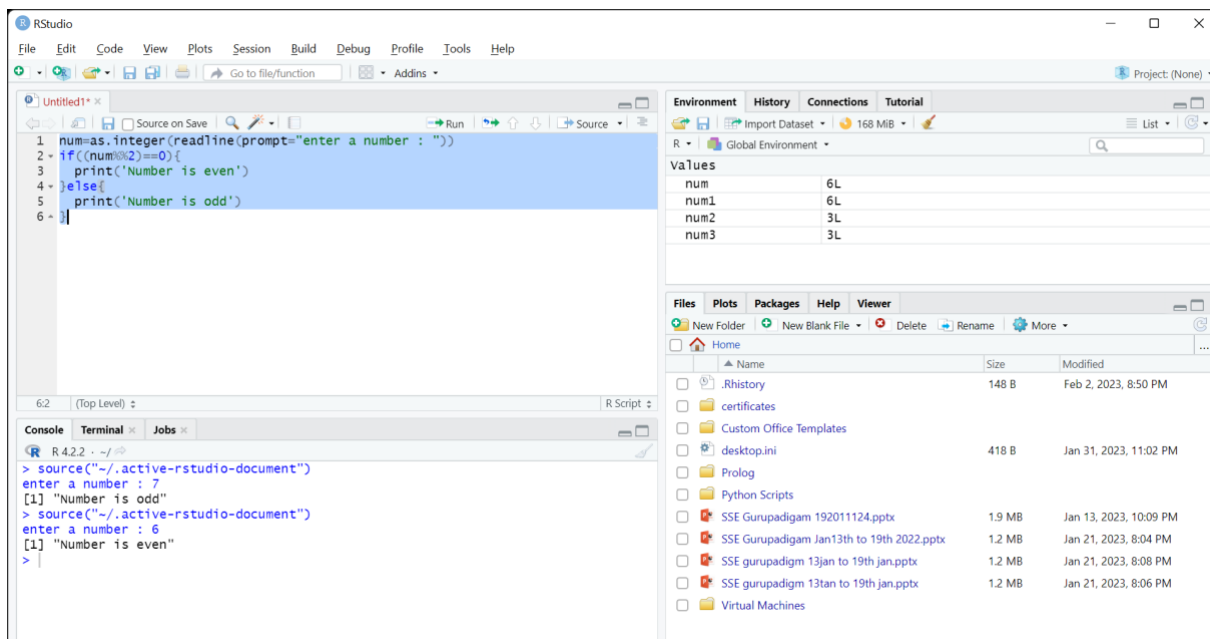
```
if((num%%2)==0){
```

```
  print('Number is even')
```

```
}else{
```

```
  print('Number is odd')
```

```
}
```



MEAN

```
names<-c("Sanju","Anshu","Gupta")
```

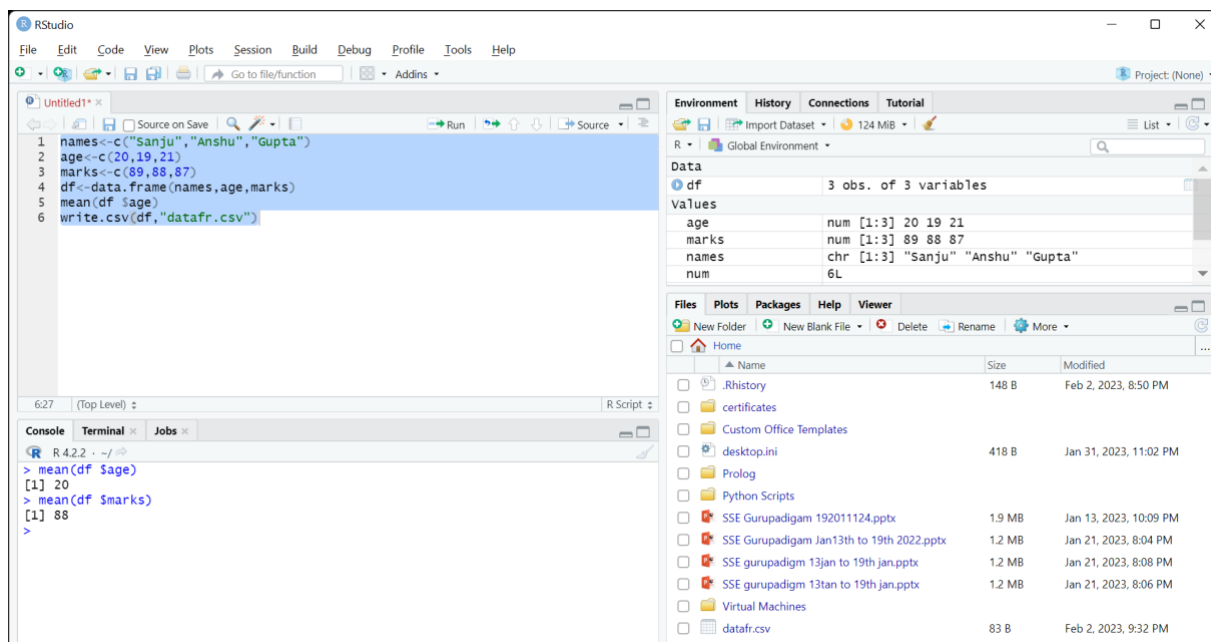
```
age<-c(20,19,21)
```

```
marks<-c(89,88,87)
```

```
df<-data.frame(names,age,marks)
```

```
mean(df $age)
```

```
write.csv(df,"datafr.csv")
```



MEDIAN

```
names<-c("Sanju","Anshu","Gupta")
```

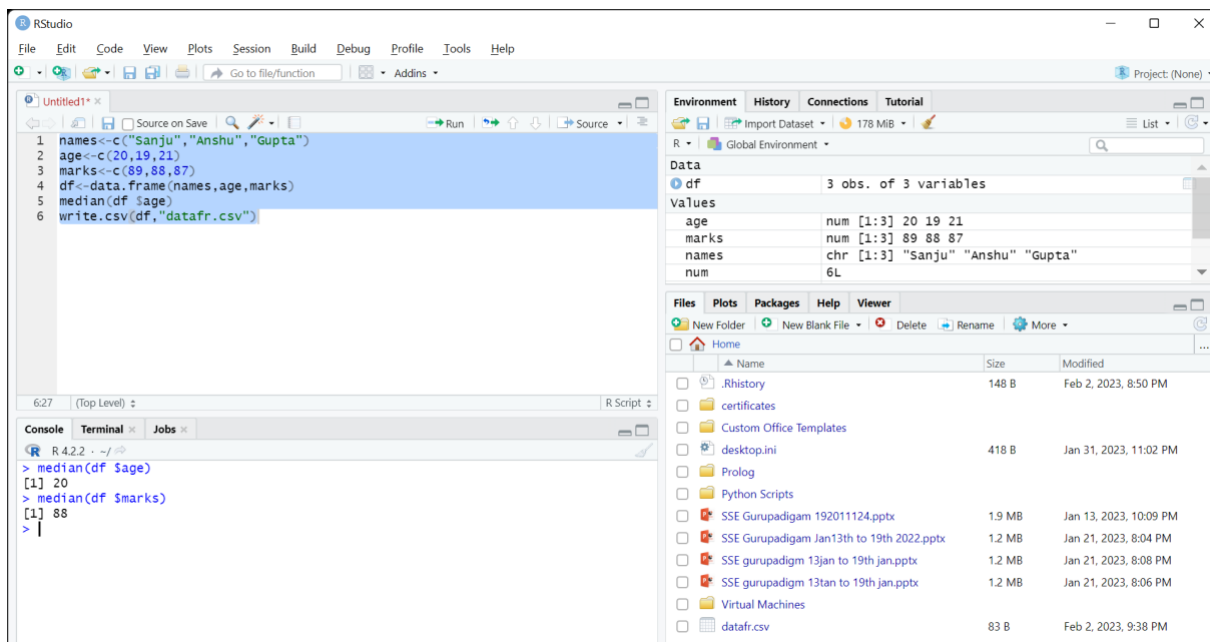
```
age<-c(20,19,21)
```

```
marks<-c(89,88,87)
```

```
df<-data.frame(names,age,marks)
```

```
median(df $age)
```

```
write.csv(df,"datafr.csv")
```



MODE

```
names<-c("Sanju","Anshu","Gupta")
```

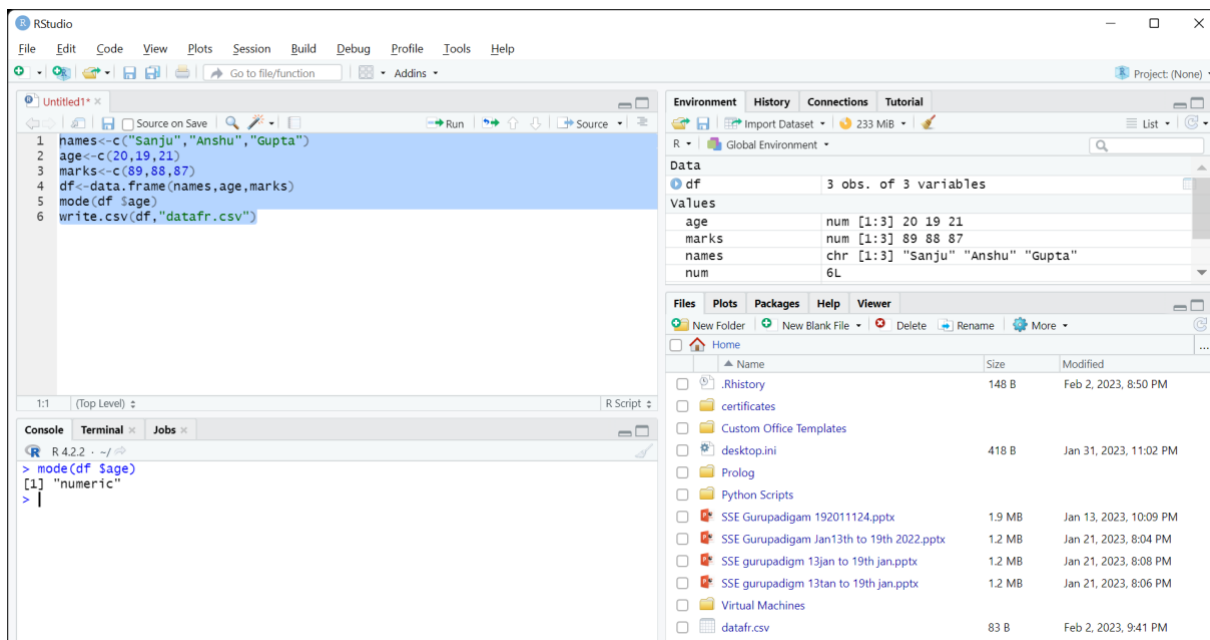
```
age<-c(20,19,21)
```

```
marks<-c(89,88,87)
```

```
df<-data.frame(names,age,marks)
```

```
mode(df $age)
```

```
write.csv(df,"datafr.csv")
```



SUMMARY

```
names<-c("Sanju","Anshu","Gupta")
```

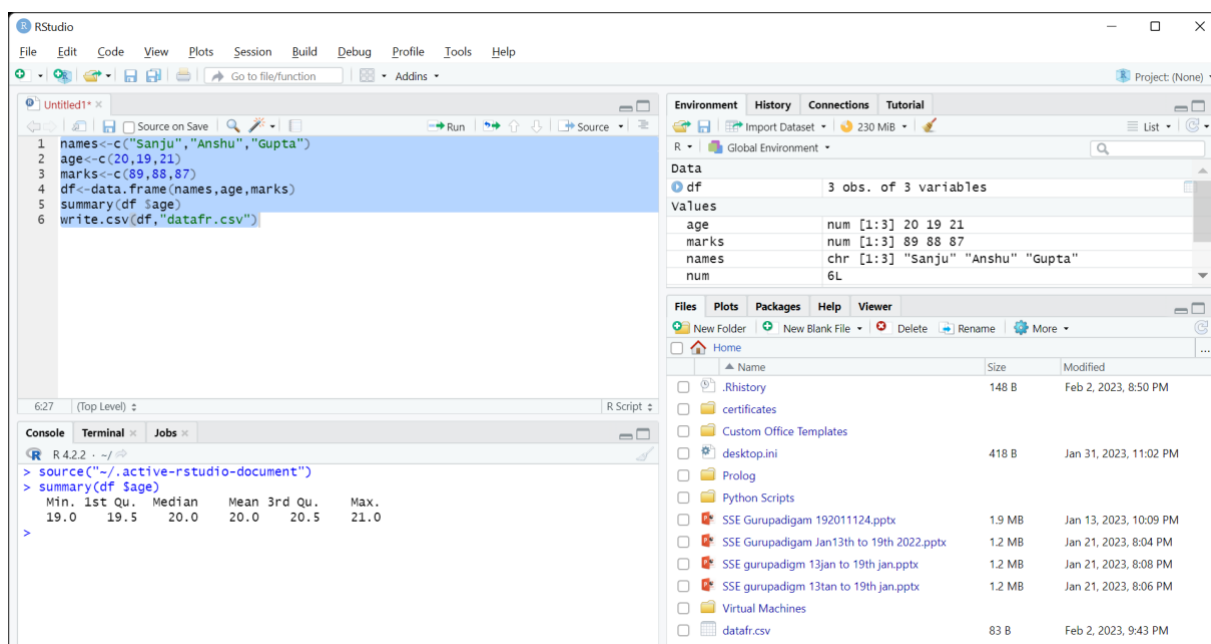
```
age<-c(20,19,21)
```

```
marks<-c(89,88,87)
```

```
df<-data.frame(names,age,marks)
```

```
summary(df $age)
```

```
write.csv(df,"datafr.csv")
```



IQR

```
names<-c("Sanju","Anshu","Gupta")
```

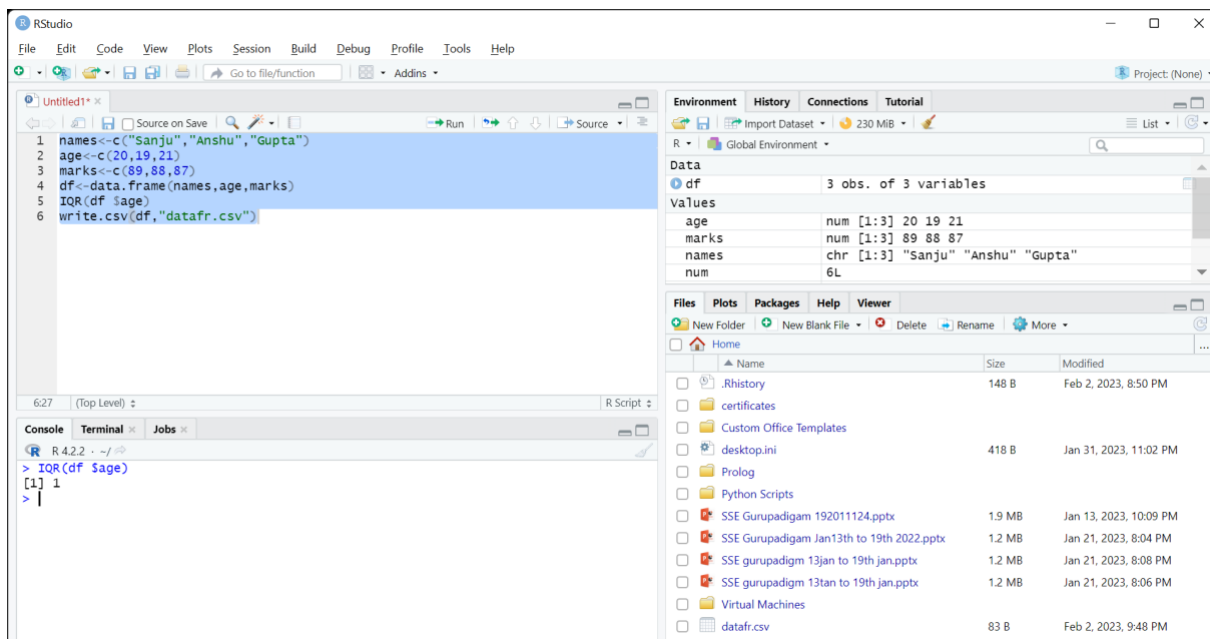
```
age<-c(20,19,21)
```

```
marks<-c(89,88,87)
```

```
df<-data.frame(names,age,marks)
```

```
IQR(df $age)
```

```
write.csv(df,"datafr.csv")
```



QUANTILE

```
names<-c("Sanju","Anshu","Gupta")
```

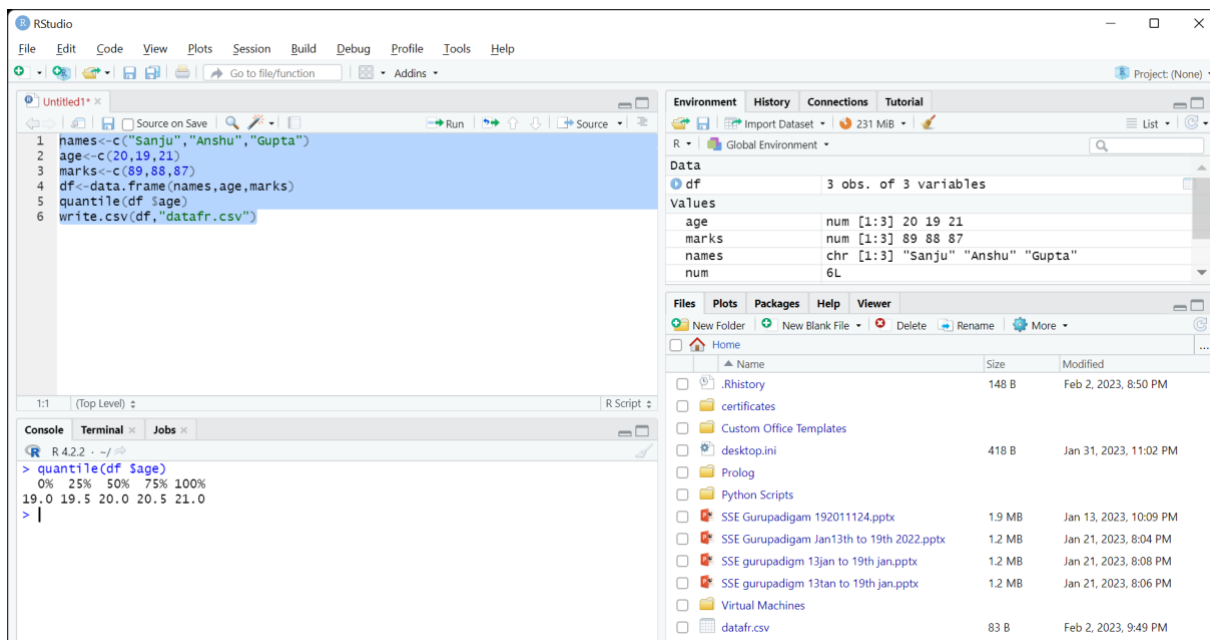
```
age<-c(20,19,21)
```

```
marks<-c(89,88,87)
```

```
df<-data.frame(names,age,marks)
```

```
quantile(df$age)
```

```
write.csv(df,"datafr.csv")
```



RANGE

```
names<-c("Sanju","Anshu","Gupta")
```

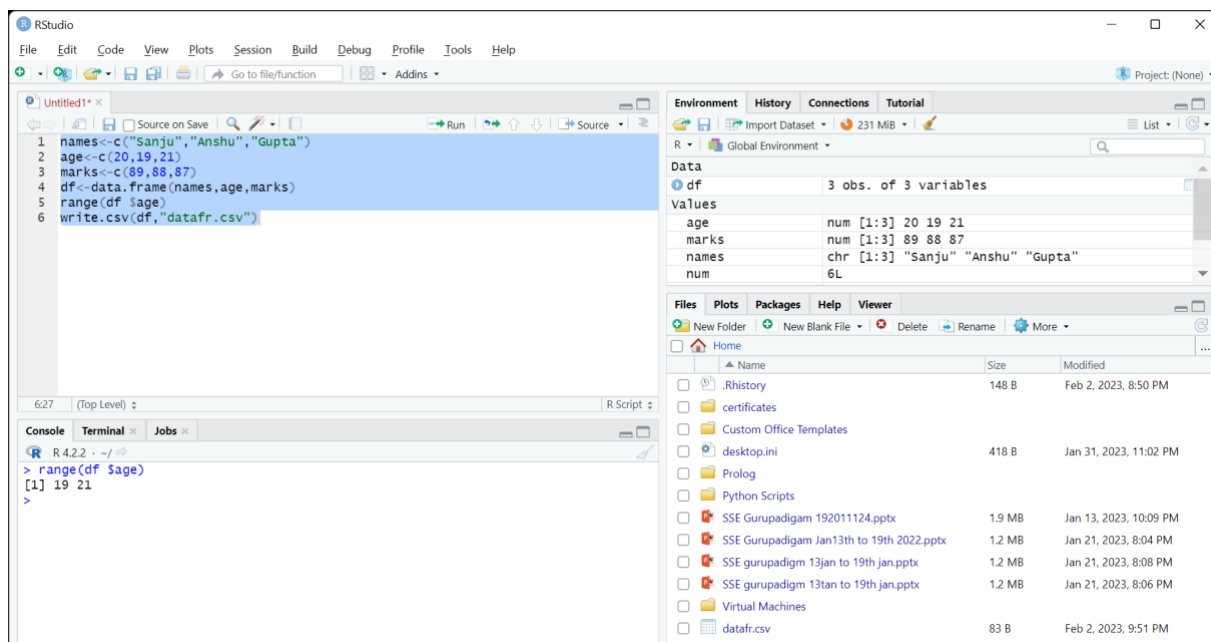
```
age<-c(20,19,21)
```

```
marks<-c(89,88,87)
```

```
df<-data.frame(names,age,marks)
```

```
range(df $age)
```

```
write.csv(df,"datafr.csv")
```



BOX PLOT

```
names<-c("Sanju","Anshu","Gupta")
```

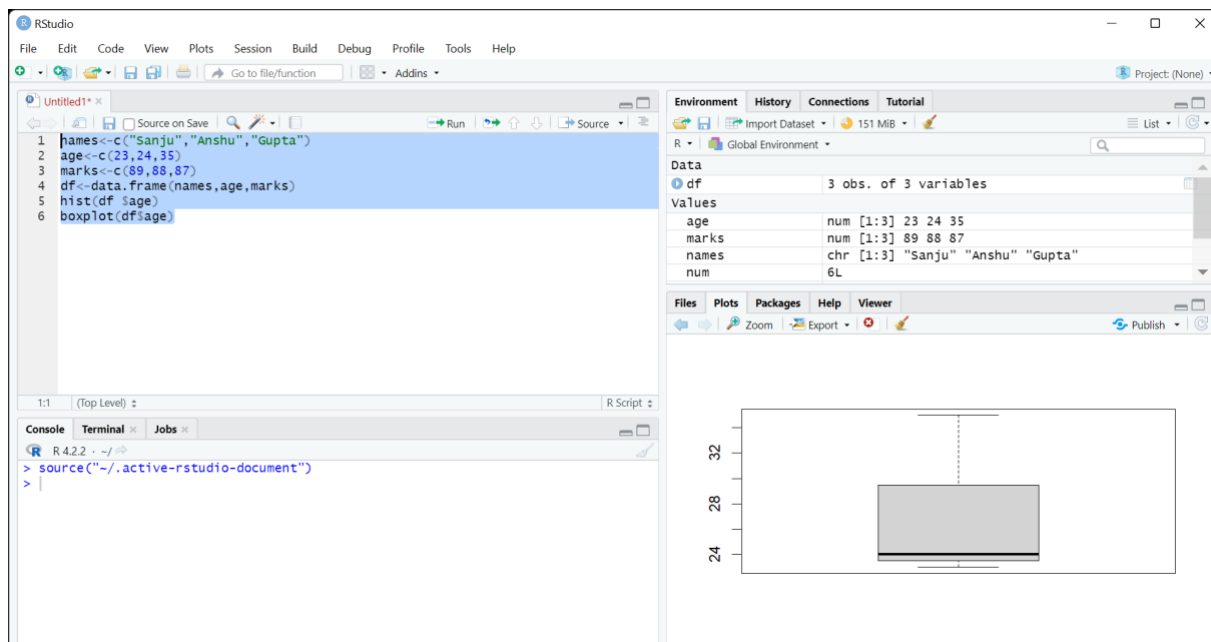
```
age<-c(23,24,35)
```

```
marks<-c(89,88,87)
```

```
df<-data.frame(names,age,marks)
```

```
hist(df $age)
```

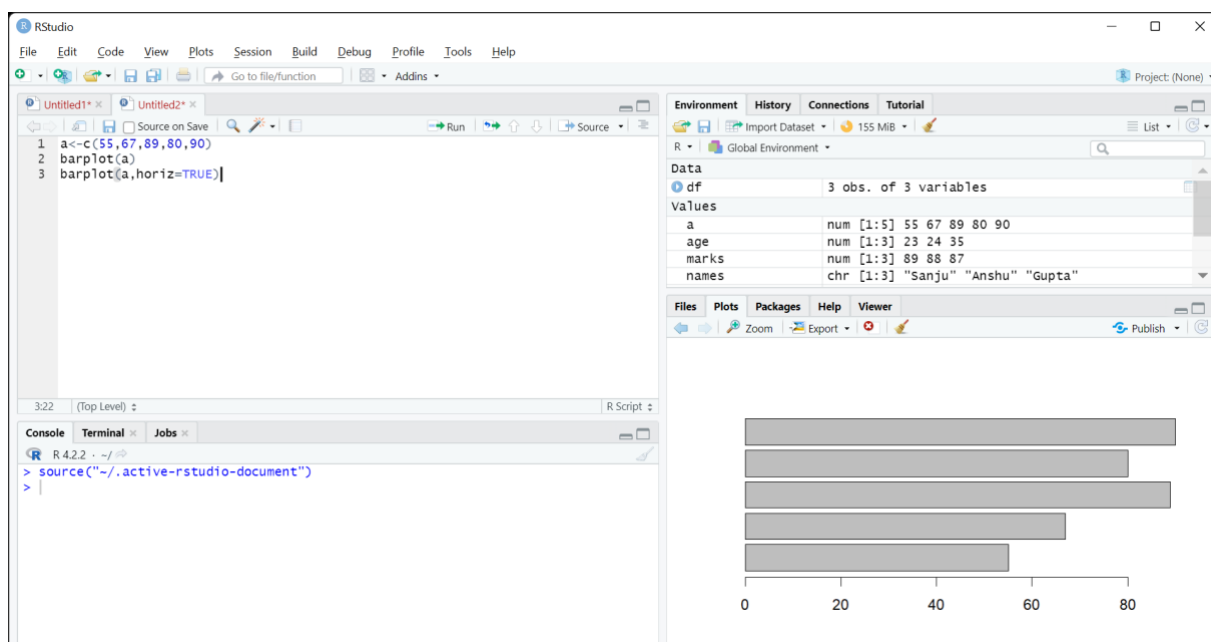
```
boxplot(df$age)
```



BARPLOT

```
a<-c(55,67,89,80,90)
```

```
barplot(a)
```

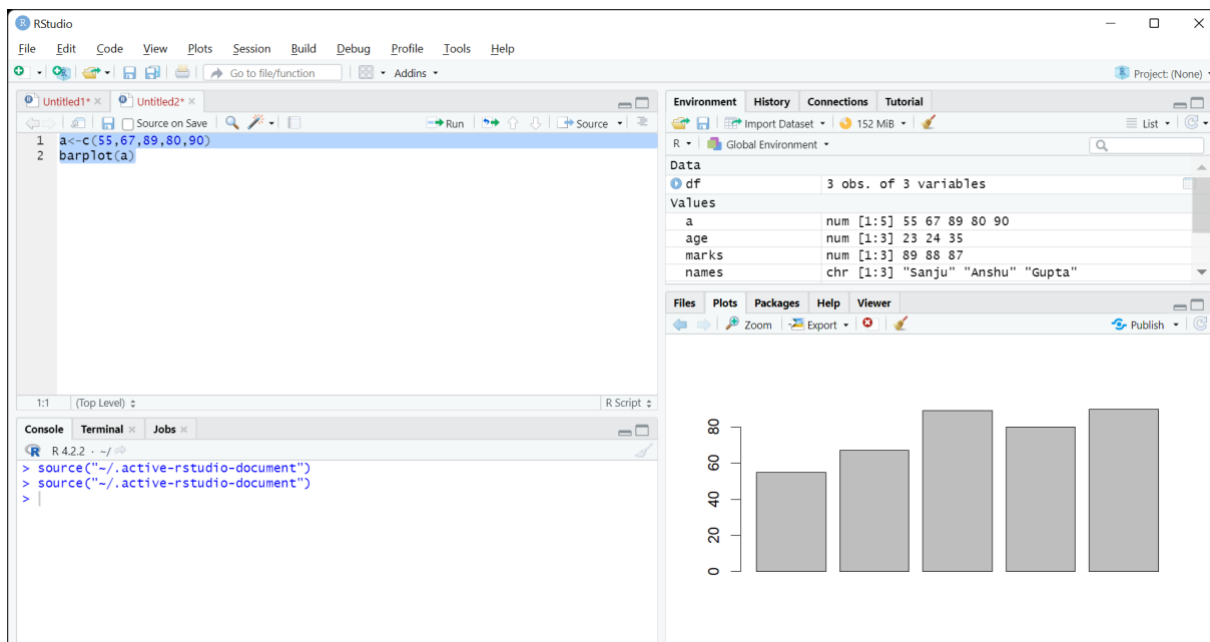


HORIZONTAL BARPLOT

```
a<-c(55,67,89,80,90)
```

```
barplot(a)
```

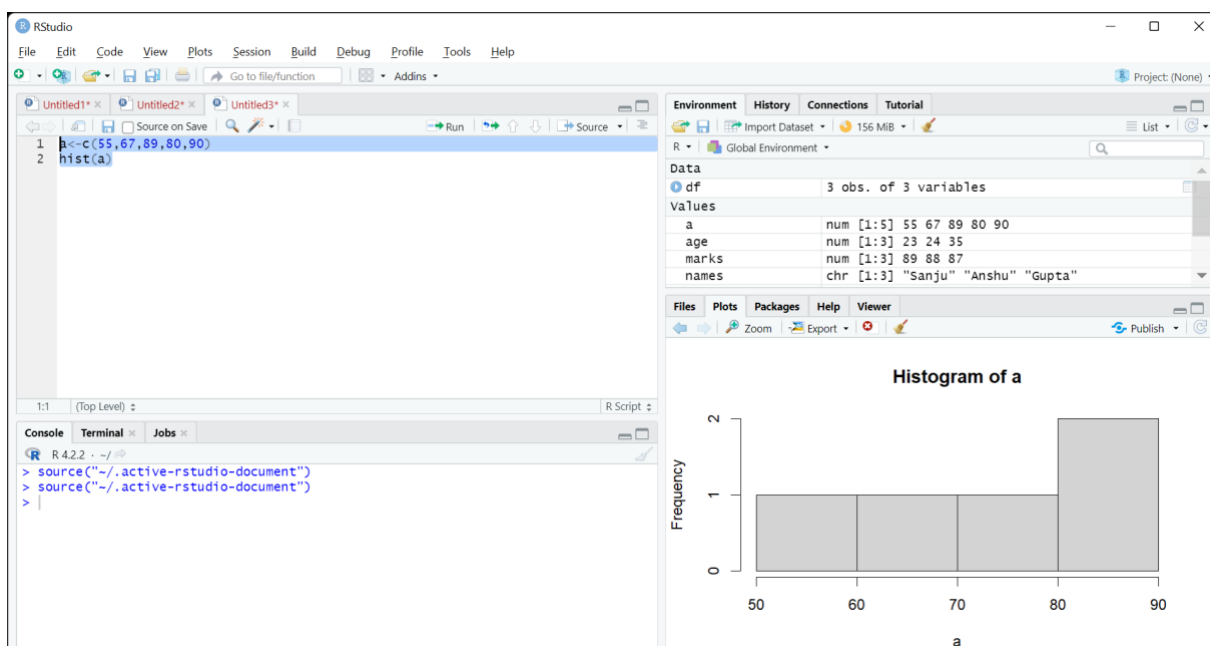
```
barplot(a,hORIZ=TRUE)
```

HISTOGRAM

```
a<-c(55,67,89,80,90)
```

```
hist(a)
```



SCATTER PLOT

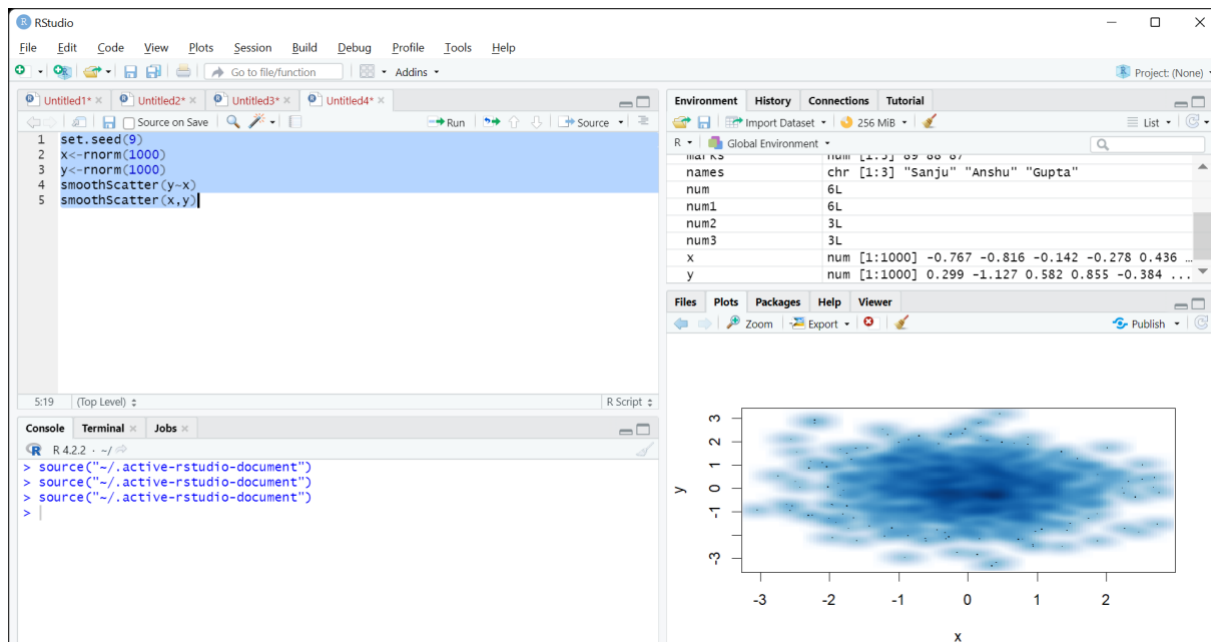
```
set.seed(9)
```

```
x<-rnorm(1000)
```

```
y<-rnorm(1000)
```

`smoothScatter(y~x)`

`smoothScatter(x,y)`

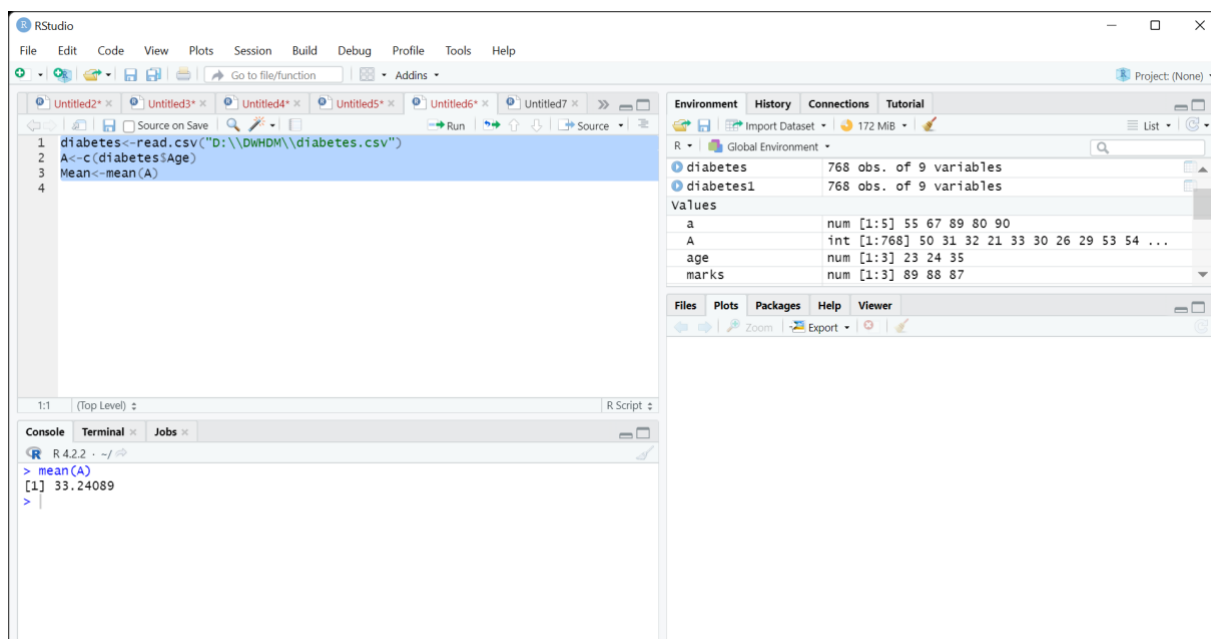


MEAN NORMALIZATION

`diabetes<-read.csv("D:\\DWHDM\\diabetes.csv")`

`A<-c(diabetes$Age)`

`Mean<-mean(A)`

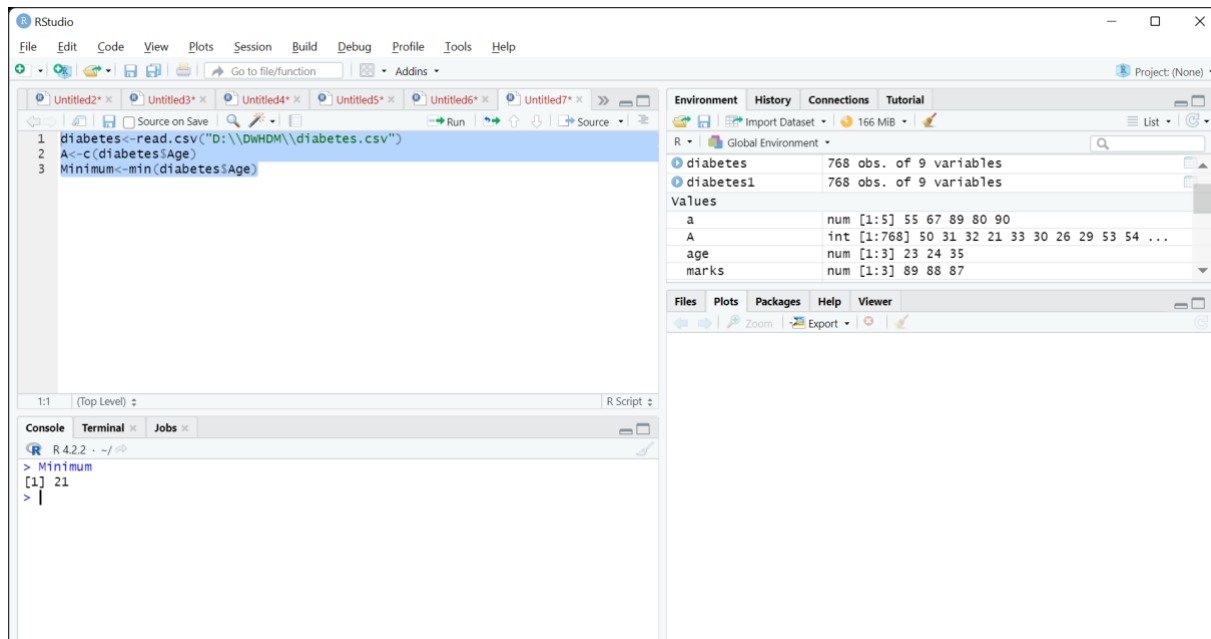


MINIMUM NORMALIZATION

```
diabetes<-read.csv("D:\\DWHDM\\diabetes.csv")
```

```
A<-c(diabetes$Age)
```

```
Minimum<-min(diabetes$Age)
```

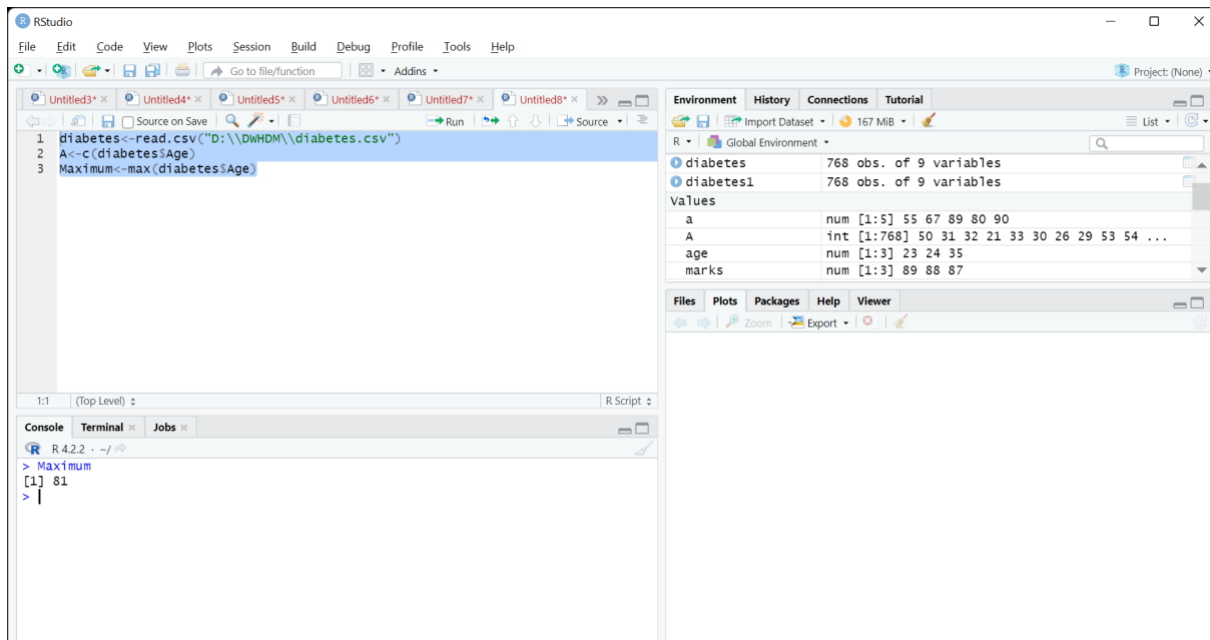


MAXIMUM NORMALIZATION

```
diabetes<-read.csv("D:\\DWHDM\\diabetes.csv")
```

```
A<-c(diabetes$Age)
```

```
Maximum<-max(diabetes$Age)
```

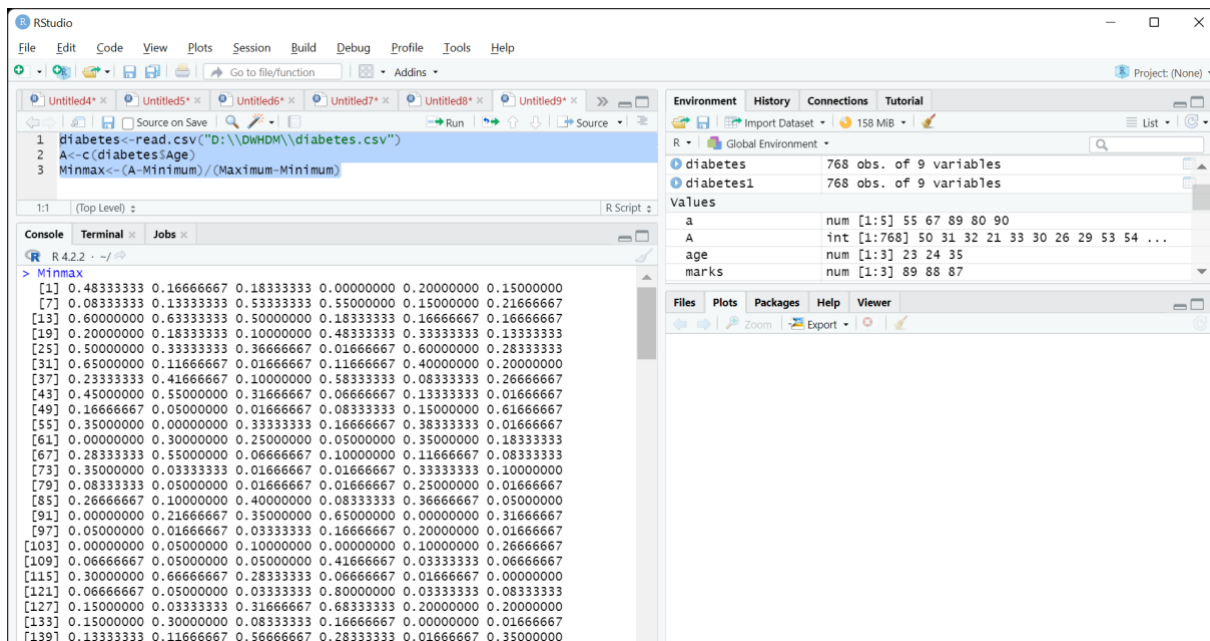


MINMAX NORMALIZATION

```
diabetes<-read.csv("D:\\DWHDM\\diabetes.csv")
```

```
A<-c(diabetes$Age)
```

```
Minmax<-(A-Minimum)/(Maximum-Minimum)
```



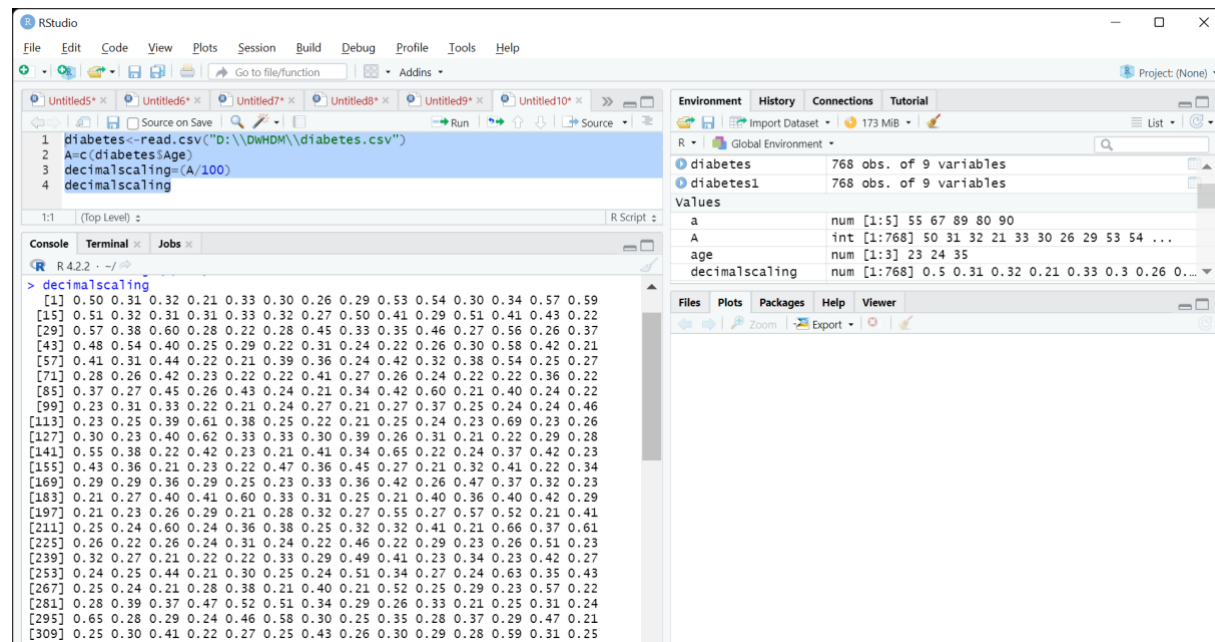
DECIMAL SCALING NORMALIZATION

```
diabetes<-read.csv("D:\\DWHDM\\diabetes.csv")
```

```
A=c(diabetes$Age)
```

```
decimalscaling=(A/100)
```

```
decimalscaling
```



```
1 diabetes<-read.csv("D:\\DWHDM\\diabetes.csv")
2 A=c(diabetes$Age)
3 decimalscaling=(A/100)
4 decimalscaling
```

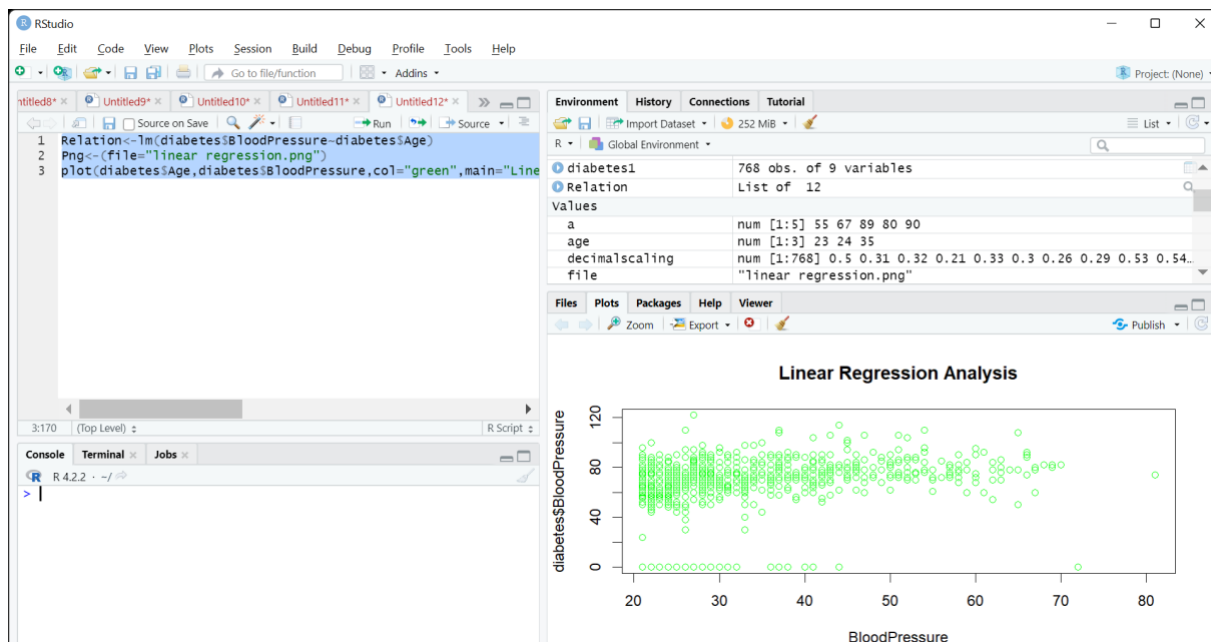
```
> decimalscaling
[1] 0.50 0.31 0.32 0.21 0.33 0.30 0.26 0.29 0.53 0.54 0.30 0.34 0.57 0.59
[15] 0.51 0.32 0.31 0.31 0.33 0.32 0.27 0.50 0.41 0.29 0.51 0.41 0.43 0.22
[29] 0.57 0.38 0.60 0.28 0.22 0.28 0.45 0.33 0.35 0.46 0.27 0.56 0.26 0.37
[43] 0.48 0.54 0.40 0.25 0.29 0.22 0.31 0.24 0.22 0.26 0.30 0.58 0.42 0.21
[57] 0.41 0.31 0.44 0.22 0.21 0.39 0.36 0.24 0.42 0.32 0.38 0.54 0.25 0.27
[71] 0.28 0.26 0.42 0.23 0.22 0.22 0.41 0.27 0.26 0.24 0.22 0.22 0.36 0.22
[85] 0.37 0.27 0.45 0.26 0.43 0.24 0.21 0.34 0.42 0.60 0.21 0.40 0.24 0.22
[99] 0.23 0.31 0.33 0.22 0.21 0.24 0.27 0.21 0.27 0.37 0.25 0.24 0.24 0.46
[113] 0.23 0.25 0.39 0.61 0.38 0.25 0.22 0.21 0.25 0.24 0.23 0.69 0.23 0.26
[127] 0.30 0.23 0.40 0.62 0.33 0.33 0.30 0.39 0.26 0.31 0.21 0.22 0.29 0.28
[141] 0.55 0.38 0.22 0.42 0.23 0.21 0.41 0.34 0.65 0.22 0.24 0.37 0.42 0.23
[155] 0.43 0.36 0.21 0.23 0.22 0.47 0.36 0.45 0.27 0.21 0.32 0.41 0.22 0.34
[169] 0.29 0.29 0.36 0.29 0.25 0.23 0.33 0.36 0.42 0.26 0.47 0.37 0.32 0.23
[183] 0.21 0.27 0.40 0.41 0.60 0.33 0.31 0.25 0.21 0.40 0.36 0.40 0.42 0.29
[197] 0.21 0.23 0.26 0.29 0.21 0.28 0.32 0.27 0.55 0.27 0.57 0.52 0.21 0.41
[211] 0.25 0.24 0.60 0.24 0.36 0.38 0.25 0.32 0.32 0.41 0.21 0.66 0.37 0.61
[225] 0.26 0.22 0.26 0.24 0.31 0.24 0.22 0.46 0.22 0.29 0.23 0.26 0.51 0.23
[239] 0.32 0.27 0.21 0.22 0.22 0.33 0.29 0.49 0.41 0.23 0.34 0.23 0.42 0.27
[253] 0.24 0.25 0.44 0.21 0.30 0.25 0.24 0.51 0.34 0.27 0.24 0.63 0.35 0.43
[267] 0.25 0.24 0.21 0.28 0.38 0.21 0.40 0.21 0.52 0.25 0.29 0.23 0.57 0.22
[281] 0.28 0.39 0.37 0.47 0.52 0.51 0.34 0.29 0.26 0.33 0.21 0.25 0.31 0.24
[295] 0.65 0.28 0.29 0.24 0.46 0.58 0.30 0.25 0.35 0.28 0.37 0.29 0.47 0.21
[309] 0.25 0.30 0.41 0.22 0.27 0.25 0.43 0.26 0.30 0.29 0.28 0.59 0.31 0.25
```

LINEAR REGRESSION

```
Relation<-lm(diabetes$BloodPressure~diabetes$Age)
```

```
Png<-(file="linear regression.png")
```

```
plot(diabetes$Age,diabetes$BloodPressure,col="green",main="Linear Regression
Analysis",abline=(lm(diabetes$BloodPressure~diabetes$Age)),xlab="BloodPressure",ylab="Age")
```



MULTIPLE REGRESSION

```
Input<-diabetes[c("Age","BloodPressure","Glucose")]
```

```
model<-lm(Age~BloodPressure+Glucose,dat=input)
```

```
print(model)
```