In [6]:

```
                                    #Q1  reverse number
{
    n = as.integer(readline(prompt = "Enter a number :"))
    s = 0

    while (n!=0) {
      r = n %% 10
      s = (s*10) + r
      n = n%/%10
    }
    print(paste("Reverse no is", s))
}

```

```
Enter a number :123654
[1] "Reverse no is 456321"
```

In [1]:

```
#calculate sum of digit of that number
{
    n = as.integer(readline(prompt = "Enter a number :"))
    s = 0

    while (n > 0) {
      r = n %% 10
      s = s + r
      n = n %/% 10
    }
    print(paste("Sum of the digits is :", s))
}
```

```
Enter a number :12321
[1] "Sum of the digits is : 9"
```

In [8]:

```
                                  #Q2 Sum of two matrix

m1=matrix(c(1,2,78,78,8,8),nrow=2)
m2=matrix(c(1,2,78,78,8,8),nrow=2)
print(m1+m2)
```

```
     [,1] [,2] [,3]
[1,]    2  156   16
[2,]    4  156   16
```

In [19]:

```
                                      #Q4  create dataframe using vector and display duplicate
d=data.frame(a=c(1,2,3,1),b=c('pradnya','pratiksha','aarti','pradnya'))
d[duplicated(d),]
```

| | a | b |
|---|---|---|
| **4** | 1 | pradnya |

In [14]:

```
a<-c(1,2,3,4,5)
b<-c(6,7,8,9)
f1<-factor(a)
f2<-factor(b)
l1<-levels(f1)[f1]
l2<-levels(f2)[f2]


f3<-factor(c(l1,l2))
print(f3)

```

```
[1] 1 2 3 4 5 6 7 8 9
Levels: 1 2 3 4 5 6 7 8 9
```

In [17]:

```
                                #Q5  perform operation on women dataset
ans<-women[women$weight>120,]
ans
```

| | height | weight |
|---|---|---|
| **4** | 61 | 123 |
| **5** | 62 | 126 |
| **6** | 63 | 129 |
| **7** | 64 | 132 |
| **8** | 65 | 135 |
| **9** | 66 | 139 |
| **10** | 67 | 142 |
| **11** | 68 | 146 |
| **12** | 69 | 150 |
| **13** | 70 | 154 |
| **14** | 71 | 159 |
| **15** | 72 | 164 |

In [33]:

```
data=women
a=data[order(data$weight),]
      a
```

| height | weight |
|---|---|
| 58 | 115 |
| 59 | 117 |
| 60 | 120 |
| 61 | 123 |
| 62 | 126 |
| 63 | 129 |
| 64 | 132 |
| 65 | 135 |
| 66 | 139 |
| 67 | 142 |
| 68 | 146 |
| 69 | 150 |
| 70 | 154 |
| 71 | 159 |
| 72 | 164 |

In [45]:

```
#Q6  perform operation on mtcars
d<-mtcars[mtcars$mpg>20,]
d

```

| | mpg | cyl | disp | hp | drat | wt | qsec | vs | am | gear | carb |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Mazda RX4** | 21.0 | 6 | 160.0 | 110 | 3.90 | 2.620 | 16.46 | 0 | 1 | 4 | 4 |
| **Mazda RX4 Wag** | 21.0 | 6 | 160.0 | 110 | 3.90 | 2.875 | 17.02 | 0 | 1 | 4 | 4 |
| **Datsun 710** | 22.8 | 4 | 108.0 | 93 | 3.85 | 2.320 | 18.61 | 1 | 1 | 4 | 1 |
| **Hornet 4 Drive** | 21.4 | 6 | 258.0 | 110 | 3.08 | 3.215 | 19.44 | 1 | 0 | 3 | 1 |
| **Merc 240D** | 24.4 | 4 | 146.7 | 62 | 3.69 | 3.190 | 20.00 | 1 | 0 | 4 | 2 |
| **Merc 230** | 22.8 | 4 | 140.8 | 95 | 3.92 | 3.150 | 22.90 | 1 | 0 | 4 | 2 |
| **Fiat 128** | 32.4 | 4 | 78.7 | 66 | 4.08 | 2.200 | 19.47 | 1 | 1 | 4 | 1 |
| **Honda Civic** | 30.4 | 4 | 75.7 | 52 | 4.93 | 1.615 | 18.52 | 1 | 1 | 4 | 2 |
| **Toyota Corolla** | 33.9 | 4 | 71.1 | 65 | 4.22 | 1.835 | 19.90 | 1 | 1 | 4 | 1 |
| **Toyota Corona** | 21.5 | 4 | 120.1 | 97 | 3.70 | 2.465 | 20.01 | 1 | 0 | 3 | 1 |
| **Fiat X1-9** | 27.3 | 4 | 79.0 | 66 | 4.08 | 1.935 | 18.90 | 1 | 1 | 4 | 1 |
| **Porsche 914-2** | 26.0 | 4 | 120.3 | 91 | 4.43 | 2.140 | 16.70 | 0 | 1 | 5 | 2 |
| **Lotus Europa** | 30.4 | 4 | 95.1 | 113 | 3.77 | 1.513 | 16.90 | 1 | 1 | 5 | 2 |
| **Volvo 142E** | 21.4 | 4 | 121.0 | 109 | 4.11 | 2.780 | 18.60 | 1 | 1 | 4 | 2 |

In [49]:

```
d<-mtcars[(mtcars$mpg>15.0),1]
d
```

21 21 22.8 21.4 18.7 18.1 24.4 22.8 19.2 17.8 16.4 17.3 15.2 32.4 30.4 33.9 21.5 15.5 15.2 19.2 27.3 26 30.4 15.8 19.7 21.4

In [63]:

```
d<-mtcars[(mtcars$gears=4),]
d
```

| | mpg | cyl | disp | hp | drat | wt | qsec | vs | am | gear | carb | gears |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hornet 4 Drive** | 21.4 | 6 | 258 | 110 | 3.08 | 3.215 | 19.44 | 1 | 0 | 4 | 1 | 4 |

In [ ]:

```

```