```
%load_ext rpy2.ipython
```

```
%%R
a=10
b=10
c=readline("enter another number")
c=as.integer(c)
print(a+b+c)
```

```
     enter another number 5
     [1] 25
```

```
%%R
a=c(1,2,3,4,5)
a
```

```
     [1] 1 2 3 4 5
```

```
%%R
# vectors index start with index 1
a[3]
```

```
     [1] 3
```

```
%%R
v <- c(5:13)
print(v)
```

```
     [1]  5  6  7  8  9 10 11 12 13
```

```
%%R
print(seq(5, 20, by = 2))
```

```
     [1]  5  7  9 11 13 15 17 19
```

```
%%R
s <- c('apple','red',5,TRUE)
print(s)
```

```
     [1] "apple" "red"   "5"     "TRUE"
```

```
%%R
# Accessing vector elements using position.
t <- c("Sun","Mon","Tue","Wed","Thurs","Fri","Sat")
u <- t[c(1,3,4)]
print(u)
```

```
     [1] "Sun" "Tue" "Wed"
```

```
%%R
# Accessing vector elements using logical indexing.
v <- t[c(TRUE,FALSE,FALSE,FALSE,FALSE,TRUE,FALSE)]
print(v)
```

```
     [1] "Sun" "Fri"
```

```
%%R
# Accessing vector elements using negative indexing.
x <- t[c(-2,-5)]
print(x)
```

```
     [1] "Sun" "Tue" "Wed" "Fri" "Sat"
```

```
%%R
t[1:3]
```

```
     [1] "Sun" "Mon" "Tue"
```

```
%%R
# Create two vectors.
v1 <- c(3,8,4,5,0,11)
v2 <- c(4,11,0,8,1,2)
# Vector addition.
add <- v1+v2
```

```
print(add)
```

```
[1]  7 19  4 13  1 13
```

```
%%R
fruits <- c("banana", "apple", "orange",3)
length(fruits)
```

```
[1] 4
```

```
%%R
fruits <- c("banana", "apple", "orange", "mango", "lemon")
numbers <- c(13, 3, 5, 7, 20, 2)

sort(fruits)  # Sort a string
```

```
[1] "apple"  "banana" "lemon"  "mango"  "orange"
```

```
%%R
sort(numbers) # Sort numbers
```

```
[1]  2  3  5  7 13 20
```

```
%%R
fruits <- c("banana", "apple", "orange", "mango", "lemon")

# Change "banana" to "pear"
fruits[1] <- "pear"

# Print fruits
fruits
```

```
[1] "pear"   "apple"  "orange" "mango"  "lemon"
```

```
%%R
data<-read.csv("stroke.csv")
data
```

```
        id gender   age hypertension heart_disease ever_married     work_type
1     9046   Male 67.00            0             1          Yes       Private
2    51676 Female 61.00            0             0          Yes Self-employed
3    31112   Male 80.00            0             1          Yes       Private
4    60182 Female 49.00            0             0          Yes       Private
5     1665 Female 79.00            1             0          Yes Self-employed
6    56669   Male 81.00            0             0          Yes       Private
7    53882   Male 74.00            1             1          Yes       Private
8    10434 Female 69.00            0             0           No       Private
9    27419 Female 59.00            0             0          Yes       Private
10   60491 Female 78.00            0             0          Yes       Private
11   12109 Female 81.00            1             0          Yes       Private
12   12095 Female 61.00            0             1          Yes      Govt_job
13   12175 Female 54.00            0             0          Yes       Private
14    8213   Male 78.00            0             1          Yes       Private
15    5317 Female 79.00            0             1          Yes       Private
16   58202 Female 50.00            1             0          Yes Self-employed
17   56112   Male 64.00            0             1          Yes       Private
18   34120   Male 75.00            1             0          Yes       Private
19   27458 Female 60.00            0             0           No       Private
20   25226   Male 57.00            0             1           No      Govt_job
21   70630 Female 71.00            0             0          Yes      Govt_job
22   13861 Female 52.00            1             0          Yes Self-employed
23   68794 Female 79.00            0             0          Yes Self-employed
24   64778   Male 82.00            0             1          Yes       Private
25    4219   Male 71.00            0             0          Yes       Private
26   70822   Male 80.00            0             0          Yes Self-employed
27   38047 Female 65.00            0             0          Yes       Private
28   61843   Male 58.00            0             0          Yes       Private
29   54827   Male 69.00            0             1          Yes Self-employed
30   69160   Male 59.00            0             0          Yes       Private
31   43717   Male 57.00            1             0          Yes       Private
32   33879   Male 42.00            0             0          Yes       Private
33   39373 Female 82.00            1             0          Yes Self-employed
34   54401   Male 80.00            0             1          Yes Self-employed
35   14248   Male 48.00            0             0           No      Govt_job
36     712 Female 82.00            1             1           No       Private
37   47269   Male 74.00            0             0          Yes       Private
38   24977 Female 72.00            1             0          Yes       Private
39   47306   Male 58.00            0             0           No       Private
40   62602 Female 49.00            0             0          Yes       Private
41    4651   Male 78.00            0             0          Yes       Private
42    1261   Male 54.00            0             0          Yes       Private
```

```
43   61960   Male 82.00            0            1          Yes       Private
44    1845 Female 63.00            0            0          Yes       Private
45    7937   Male 60.00            1            0          Yes      Govt_job
46   19824   Male 76.00            1            0          Yes       Private
47   37937 Female 75.00            0            1           No Self-employed
48   47472 Female 58.00            0            0          Yes       Private
49   35626   Male 81.00            0            0          Yes Self-employed
50   36338 Female 39.00            1            0          Yes       Private
51   18587 Female 76.00            0            0           No       Private
52   15102   Male 78.00            1            0          Yes       Private
53   59190 Female 79.00            0            1          Yes       Private
54   47167 Female 77.00            1            0          Yes Self-employed
55    8752 Female 63.00            0            0          Yes      Govt_job
```

```
%%R
# List of strings
thislist <- list("apple", "banana", "cherry")

# Print the list
thislist
```

```
[[1]]
[1] "apple"

[[2]]
[1] "banana"

[[3]]
[1] "cherry"
```

```
%%R
# indexing
thislist <- list("apple", "banana", "cherry")

thislist[1]
```

```
[[1]]
[1] "apple"
```

```
%%R
#updating
thislist <- list("apple", "banana", "cherry")
thislist[1] <- "blackcurrant"

# Print the updated list
thislist
```

```
[[1]]
[1] "blackcurrant"

[[2]]
[1] "banana"

[[3]]
[1] "cherry"
```

```
%%R

thislist <- list("apple", "banana", "cherry")

"apple" %in% thislist
```

```
[1] TRUE
```

```
%%R
"appless" %in% thislist
```

```
[1] FALSE
```

```
%%R
thislist <- list("apple", "banana", "cherry")

append(thislist, "orange")
```

```
[[1]]
[1] "apple"

[[2]]
```

```
[1] "banana"

[[3]]
[1] "cherry"

[[4]]
[1] "orange"
```

```
%%R
thislist <- list("apple", "banana", "cherry")

append(thislist, "orange", after = 2)
```

```
[[1]]
[1] "apple"

[[2]]
[1] "banana"

[[3]]
[1] "orange"

[[4]]
[1] "cherry"
```

```
%%R
thislist <- list("apple", "banana", "cherry")

newlist <- thislist[-1]

# Print the new list
newlist
```

```
[[1]]
[1] "banana"

[[2]]
[1] "cherry"
```

```
%%R
thislist <- list("apple", "banana", "cherry", "orange", "kiwi", "melon", "mango")

(thislist)[2:5]
```

```
[[1]]
[1] "banana"

[[2]]
[1] "cherry"

[[3]]
[1] "orange"

[[4]]
[1] "kiwi"
```

```
%%R
list1 <- list("a", "b", "c")
list2 <- list(1,2,3)
list3 <- c(list1,list2)

list3
```

```
[[1]]
[1] "a"

[[2]]
[1] "b"

[[3]]
[1] "c"

[[4]]
[1] 1

[[5]]
[1] 2

[[6]]
```

```
[1] 3
```