```
> #perform t-test
> x<-rnorm(100)#define sample vector
> #1-sample t-test
> t.test(x,mu=5)

        One Sample t-test

data:  x
t = -51.161, df = 99, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 5
95 percent confidence interval:
 -0.1960962  0.1919011
sample estimates:
   mean of x
-0.002097555

> #2-sample t-test
> m<-rnorm(50)
> n<-rnorm(50)
> t.test(m,n)

        Welch Two Sample t-test

data:  m and n
t = -1.0189, df = 97.552, p-value = 0.3108
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
 -0.6105396  0.1962993
sample estimates:
 mean of x  mean of y
-0.0995753  0.1075448

> #Directional Hypothesis
> a<-rnorm(150)
> t.test(a, mu = 2, alternative = 'greater')

        One Sample t-test

data:  a
t = -23.235, df = 149, p-value = 1
alternative hypothesis: true mean is greater than 2
95 percent confidence interval:
 -0.239382       Inf
sample estimates:
  mean of x
-0.09046681

> #One Sample mu-Test
> b<-rnorm(70)
> wilcox.test(b, exact = FALSE)

        Wilcoxon signed rank test with continuity correction

data:  b
V = 1661, p-value = 0.01444
alternative hypothesis: true location is not equal to 0

> #2 sample mu-test
> c<-rnorm(55)
> d<-rnorm(50)
> wilcox.test(c,d)

        Wilcoxon rank sum test with continuity correction

data:  c and d
W = 1574, p-value = 0.2028
alternative hypothesis: true location shift is not equal to 0

> #correlation test
> cor.test(mtcars$mpg, mtcars$hp)

        Pearson's product-moment correlation

data:  mtcars$mpg and mtcars$hp
t = -6.7424, df = 30, p-value = 1.788e-07
alternative hypothesis: true correlation is not equal to 0
95 percent confidence interval:
 -0.8852686 -0.5860994
sample estimates:
       cor
-0.7761684
```