```
Parameki'c tests
a) paired - t-test.
print ("enter the dataz")
datal = scan ()
print (" enter the dataz")
dataz= scanci
                                        B. AMBINSTE. ROF
Print ("enter the significance percentage")
aipha = scani)
n=length(data1)
    as the ballogramming somewill some Miner on ex
di = datal - data 2
dbar sum(di)In
 5d =0
 forci in di) {
   50:50+ ((i-dbq1) 12)
sd = sdl(n-1)
sd = sd n 0.5
res = dbai * (n 10.5)
t= re 6 15d
tab-val = qt (1-(alpha 12), n-1)
Print ( pask (" dbar (alculakd: ", dbgr))
print ( paste (" so calculated: ", sod))
print( paste (" + value calculated : ", t))
```

```
print(paske(" +-table value : ", tab-val))
if (+>+ab-val) {
Print (pask (" there is some significance difference between paint
         observations"))
 301501
 print ("There is AO significance difference between paired observations
```

```
enki the datas
       127 168 143 165 122
                                PASSED [HETCHENG) ( PL COM
enter the dataz
            132 171 153 149
       135
enter the significance purcentage
001
d bar calculated -5
               а 4: 0 24,986 | stronging of 1 +3+05 " ) lain,
sd calculated
                                           (1/10) Drigir
t val calculated +0.50977
                                         Atoloko Houston
                4.038142
t-table value
Thre is no significance difference between paired observations
                                         ( ! ( Ib) ( rije
                                              Acids on inch
                                   14 / hoods ill about
                                               Pow his the
                                        1. O'min mal con
                                                 bels or at
                              (10, (Spayer a) lips I product
                  ausbert, " bypusted from " Deep I down
                       Alber" is on motor be") of any games
```

with pask of panes cokulated it the

```
b) F-kgt
                                    a old and is
Print("enter the data1")
                    18 Mr. at at XI
datal=scan()
Print ("enkr the data 2") spotoson som dimple soll is
data 2= scanc)
                                    a plob do on
print ("enter the significance percentage")
                                      applot to no
alpha: scani)
                        8888 1: 1. 1. 10 10 511
                           ue of is significe: 28.1
ni=10ng th (datai)
nz=length (dataz) proofer o: boliniusion 1 10 011
                           limble value : 4 170 css
xbar = sum(datai)|n1
4 pal = somicolatarina sould this some lingic on pies
5d1=0
5d2=0
for (i in data) {
  sa= sat(li-xbar) 12)
forci in data2){
  sd2=5d2+((j-ybar)12)
4
sd1 = sd11(01-1)
sd2 = sd2(n2-1)
f = sdilsdz
tab-val = 9f([1-alpha), n,-1, n2-1)
```

DVD 9 10 Stores: 049064

11.4.5

```
Print(paste(" mean of data!", xbai))

Print(paste(" mean of data2", ybar))

Print(paste(" value of si square", edi))

Print(paste(" value of si square", sd2))

Print(paste(" value of fibliculabed:", f1))

Print(paste(" f table value:", tab-val))

if (f> tab-val)

{
    print(" there is some significance difference between two variances")
```

```
Output
enkr the datal
                              A Property design
                 24 22 23
16
  26 27
             23
                           Totalob site haters "an
enter the data 2
                              and annose to.
33 42 35 32 28 31
enter the significance percentage ( colors oft rolling)
                              LILE FRONCES
0.05
mean of data 2 : 33.5
                                   (Inp) & conf.
value of 51 square : 12.6666
                                ring the identary
value of sisquare: 22.7
                                length (datas)
value of featurated: 0.5580029
f table value: 4.950288
                              sum (data) In
```

there is no significance diff between two variances

from datally (contra)

11 - 500 + (CK - 11000) x 31

Something the state of the stat

Page No.:

```
LAB-11 non parametric test
Wilcox on signed rank test
my = sort = function (data) {
                         como albacan an
                                                 11.
   1= length (data)
   for (iin 1: (1-1)){
      min=i
      for (; in (iti): L) {
         if (abs (data[j]) x abs (data[min]))
           min=i
     temp = data[min]
                                           11 11 10 mi
     dtacmin : data [i]
     dataci] = temp
                                  de out to mominion
  return (data)
                                            C & Station Stort
print ("enter the data")
                                           04 195016 31
xi = 5 can ()
print( "enter the median")
ma = scan()
di=xi-m
arr = my-sort (di)
absolute =abs(a11)
ranks=(1: length(xi))
```

```
t plus=0
  t minusio
  j=1
 for (i in arr) (
   if cixole
      tminus: timus ti
      1+i=i
   Jelse 2
      tplus = tplustj
      1+じ=じ
د را
t=min (tplus, tminus)
tab-val = (q sign rank (0,0.25, long +n (xi)) -1)
data = data · frame (xi, di, ari, absoluti, ranks)
Printidata, row.names = FALSE)
print ( paste (sum of Ttil, tplus))
print (paste (" sum of T - :", +minus))
print (paste(" minimum of two:",t))
Print ( Paste (" table value :", tab-val))
if (t> tab-vai) {
  print (" we accept to")
3 clse1
 Print("we reject Ho")
```

R.V.R. & J.C. Stores: 9490642699

```
output
         cnte the data
         36 29 44 28 40 50 39 47 33
                                                                                                                                                               The state of the s
         enter the median
                                                                                                                                                               July 1 mark 1 Harris 1 1 1 1
         35
                                                                                                                                                         I to be have derived the second to be
      xi
                            di
                                                                                     absolute
                                                                011
                                                                                                                                       ronks
                                                                                                                                                                                                 36
                              1
                                                                                                                                                       29
                                                                                                      2
                                                             -2
                            -6
                                                                                                                                              2
    44
                            9
                                                                                                                                           3
                                                                                                     4
                                                               4
   28
                            ~7
                                                             5
                                                                                                                                                            912 124 3 10 10 10
                                                                                                    5
                                                                                                                                          4
   40
                                                         -6 Michigan Sur 2/ Meter same
                           5
   50
                    15
                                                          -1
                                                                                                                                         6
                                                                                                                                                                                               39
                                                          .9
                                                                                                  9
                              4
                                                                                                                                        7
 47
                              12
                                                           12
                                                                                                   12
                                                                                                                                         8
                                                            15
 33
                                                                                                    15
                                                                                                                                         9
                                                                                                                                                                                Marie Land Commence
sum of T+: 32
                                                                                                                                                                          A Barrier Branch &
Sum of T -: 13
                                                                                                                                                                                             Marine Carlotte
 minimum of two: 13
table value: 5
                                                                                                                                                                                                                        We accept to
```