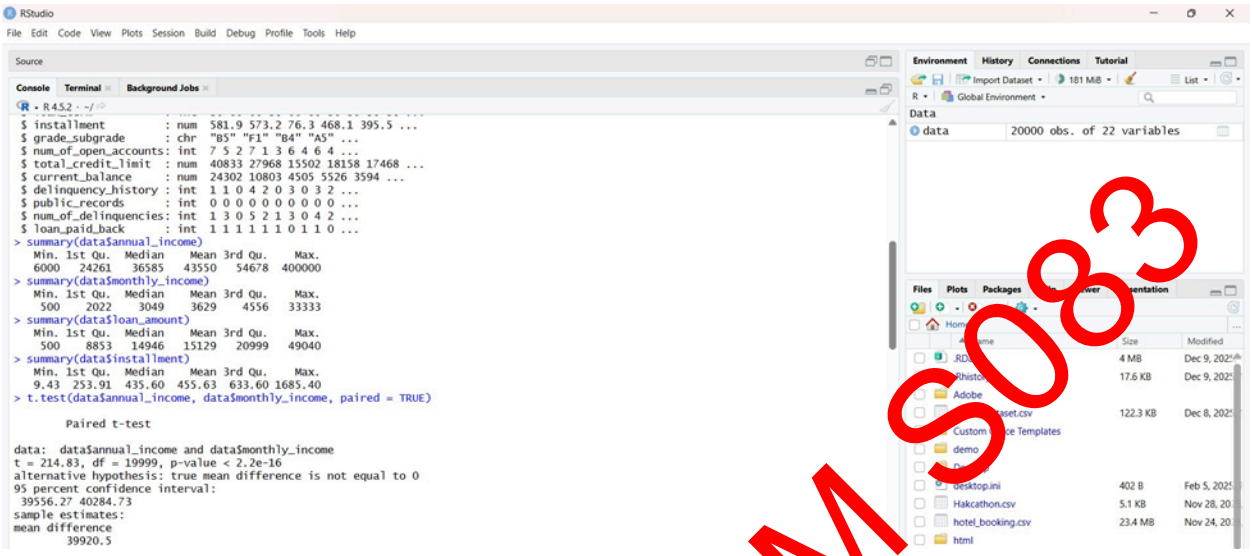
SHETH L.U.J. & SIR M.V. COLLEGE OF SCIENCE
SUBJECT - Data Analysis with R/SAS/SPSS

Aim - Performing paired t-tests using t.test(paired=TRUE) (R).

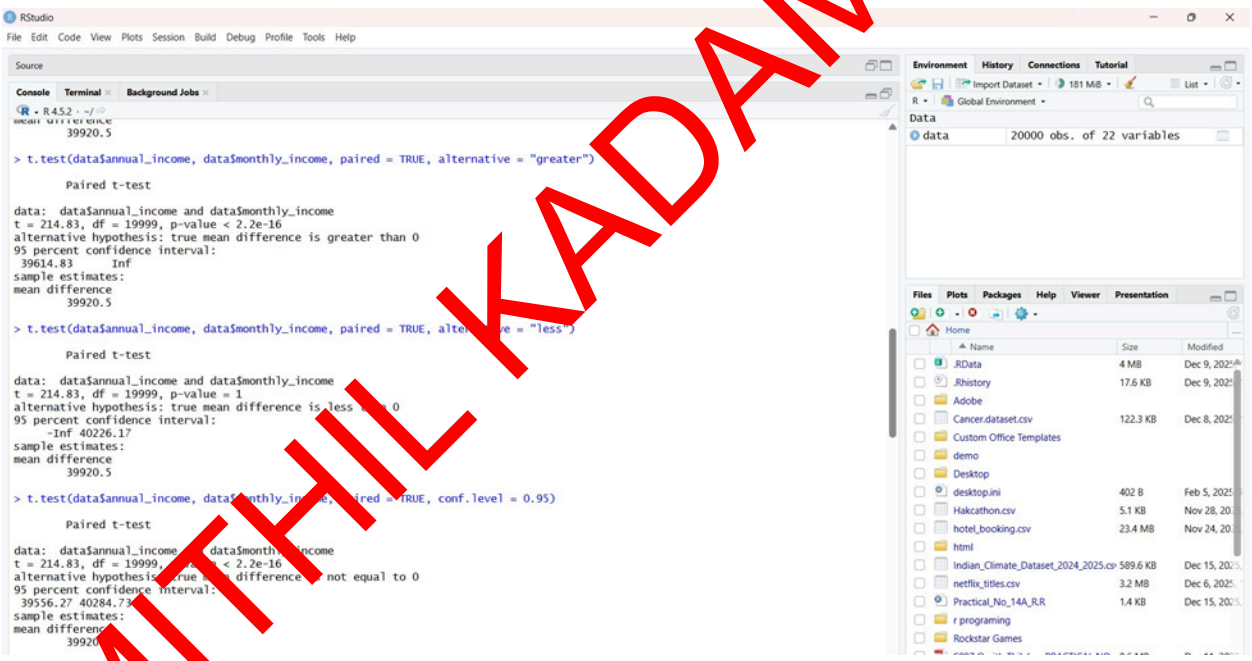
Output :



```
$ installment          : num  581.9 573.2 76.3 468.1 395.5 ...
$ grade_subgrade       : chr  "B5" "F1" "B4" "A5" ...
$ num_of_open_accounts: int  7 5 2 7 1 3 6 4 6 4 ...
$ total_credit_limit   : num  40833 27968 15502 18158 17468 ...
$ current_balance      : num  24302 10803 4505 5526 3594 ...
$ delinquency_history : int  1 1 0 4 2 0 3 0 3 2 ...
$ public_records       : int  0 0 0 0 0 0 0 0 0 0 ...
$ num_of_delinquencies: int  1 3 0 5 2 1 3 0 4 2 ...
$ loan_paid_back       : int  1 1 1 1 1 1 0 1 1 0 ...
> summary(data$annual_income)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
   6000   24261   36585   43550   54678  400000
> summary(data$monthly_income)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
    500    2022    3049    3629    4556   33333
> summary(data$loan_amount)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
    500    8853   14946   15129   20999   49040
> summary(data$installment)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
   9.43  253.91  435.60  455.63  633.60 1685.40
> t.test(data$annual_income, data$monthly_income, paired = TRUE)

        Paired t-test

data:  data$annual_income and data$monthly_income
t = 214.83, df = 19999, p-value < 2.2e-16
alternative hypothesis: true mean difference is not equal to 0
95 percent confidence interval:
 39556.27 40284.73
sample estimates:
mean difference
        39920.5
```



```
        39920.5

> t.test(data$annual_income, data$monthly_income, paired = TRUE, alternative = "greater")

        Paired t-test

data:  data$annual_income and data$monthly_income
t = 214.83, df = 19999, p-value < 2.2e-16
alternative hypothesis: true mean difference is greater than 0
95 percent confidence interval:
 39614.83      Inf
sample estimates:
mean difference
        39920.5

> t.test(data$annual_income, data$monthly_income, paired = TRUE, alte       e = "less")

        Paired t-test

data:  data$annual_income and data$monthly_income
t = 214.83, df = 19999, p-value = 1
alternative hypothesis: true mean difference is less       0
95 percent confidence interval:
     -Inf 40226.17
sample estimates:
mean difference
        39920.5

> t.test(data$annual_income, data$monthly_in      , ired = TRUE, conf.level = 0.95)

        Paired t-test

data:  data$annual_income      data$month      ncome
t = 214.83, df = 19999,       < 2.2e-16
alternative hypothesis:  rue      difference      not equal to 0
95 percent confidence interval:
 39556.27 40284.73
sample estimates:
mean differenc
        3992
```


Name - Mithil Kadam
Roll No - S083

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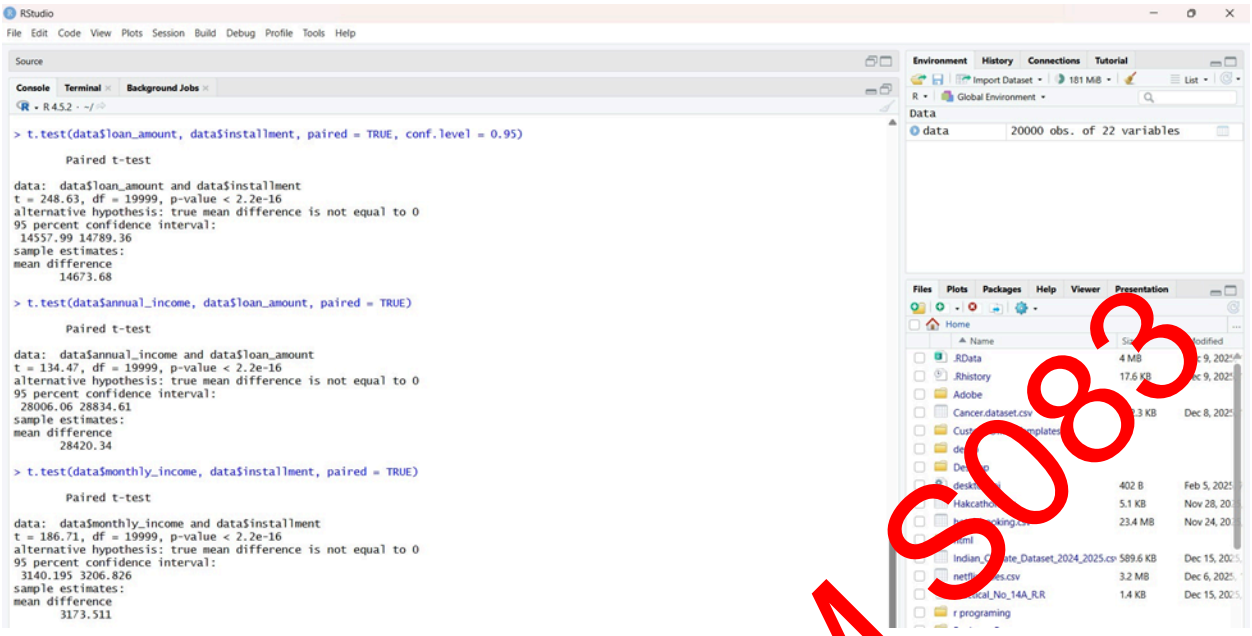

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