MAT5007 – Applied Statistical Methods

Embedded Lab – *R* Statistical Software

FALL SEMESTER –
20222023L25+L26
SLOT

E-RECORD

Experiment No.: 8

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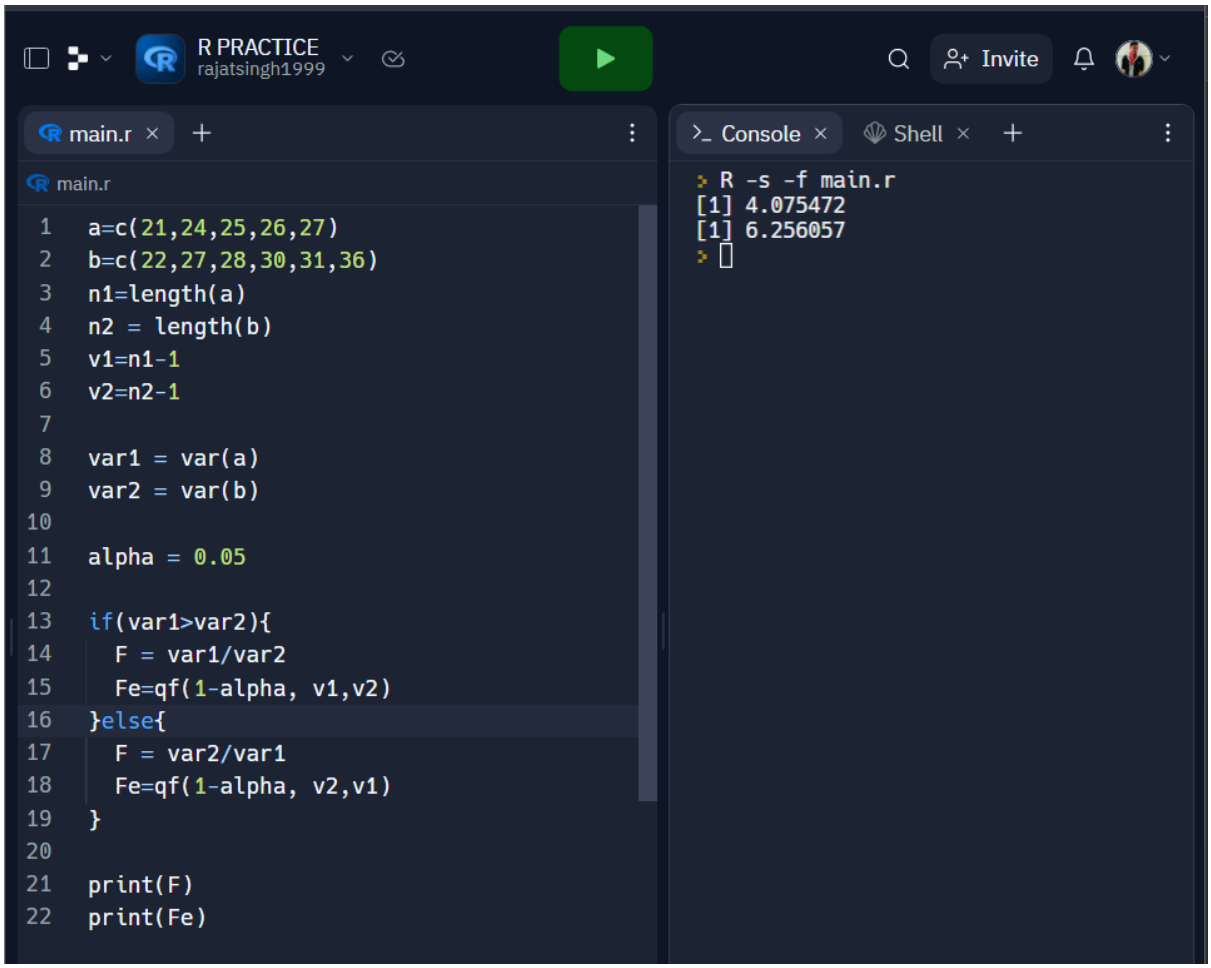
Note:The codes are done in "repl it" environment because I was facing errors in Rstudio due to my laptop data being corrupted. Thank You for the considerations.

1. The following data relate to the marks obtained by 11 students in two sets, one held at the beginning of a year and the other at the end of the year after intensive coaching. Do the data indicate that the students have benefited by coaching at 5 % level of significance?

   Test I : 19 23 16 24 17 18 20 18 21 19 20 Test II : 17 24 20 24 20 22 20 20 18 22 19

   The p-value 0.164 is greater than the 0.05 (left tailed test). Hence, at 0.05 significance level, we fail to reject the null hypothesis that the students have performed similar after coaching as they did before coaching

2. Two random samples drawn from two normal populations with the following observations. Sample I : 21 24 25 26 27 Sample II : 22 27 28 30 31 36 Write down the R programming code to test whether the two populations have the same variance at 5% level of significance.



We see that F<Fe. Hence, at 0.05 significance level, we fail to reject the null hypothesis that the two populations have the same variance