
Course: Basics of R programming language for statistical analysis

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CHAPTER 2: CONTROL STRUCTURES AND FUNCTIONS | Statistical measures

Meeting 4: Conditional statements

Exercises

Recap QUIZ: https://tinyurl.com/meeting4RECAPquizz

[Estimated time: 10 min]

PRODUCE Tasks:

1. rBasics_Meeting4.r>line155>EXERCISE POINT_1: The grades of 5 students in statistics and econometrics are presented below:

```
gradesStatistics=c(3, 6, 9, 7, 4)          #grades in statistics class
gradesEconometrics=c(5, 7, 10, 6, 3)       #grades in econometrics class
```

Write a conditional statement that:

---For students that took at least 5 in both classes [grade statistics>=5 AND grade econometrics>=5] computes the averageGrade [arithmetic mean].

---For the rest prints "DID NOT PASS ONE OR BOTH EXAMS".

Check the statement on student 1 and 2.

[Estimated time: 10 min]

2. rBasics_Meeting4.r>line164>EXERCISE POINT_2: Five students want to eroll in an R programming class. Their grades in statistics and econometrics are presented below:

```
gradesStatistics=c(3, 6, 9, 7, 4)          #grades in statistics class
gradesEconometrics=c(5, 7, 10, 6, 3)       #grades in econometrics class
```

Students are eligible to be admitted to the R programming class if they took at least 5 in one of the classes [grade statistics>=5 OR grade econometrics>=5].

Using a conditional statement of your choice, print "ACCEPTED" or "REJECTED" for canditate 1.

[Estimated time: 10 min]

DEBUG tasks:

1. Run samyCode_DebugTutorial.r code in rBasics_Meeting4_DEBUG folder and try to understand the debugging process in case of a longer section of code.

[Estimated time: 15 min]

COMMENT Tasks:

1. Comment the <<minMaxNormalization.r>> code in the rBasics_Meeting4_COMMENT>Exercise 1 folder.

[Estimated time: 45 min]

2. Comment the <<medianValues.r>> code in the rBasics_Meeting4_COMMENT>Exercise 2 folder.

[Estimated time: 45 min]

Challenge 1_REPRODUCE: Find an R built-in function that computes the quartiles. Compute quartiles for <<number of enrolled students>> in <<Campus crime.csv[i]>> dataset.

[Estimated time: 10 min]

Challenge 2_REPRODUCE: Compute the quartiles (in challenge 1 above) by yourself through the usage of a conditional statement of your choice.

[Estimated time: 30 min]

Challenge 3_REPRODUCE: Find an R built-in function that computes the quartiles for all the columns in a dataframe. Compute quariles for <<Campus crime.csv>> dataset.

[Estimated time: 10 min]

Challenge 4_REPRODUCE: Compute the quartiles (in challenge 2 above) by yourself through the usage of a loop and a conditional statement of your choice.

[Estimated time: 30 min]

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[i] The data set comprises part of *campus* data from *Wooldridge, Jeffrey M. (2013). Introductory econometrics: a modern approach. Mason, Ohio: South-Western Cengage Learning. Wooldridge Source: These data were collected by Daniel Martin, a former MSU undergraduate, for a final project. They come from the FBI Uniform Crime Reports and are for the year 1992.* The original data set is available for download at:
(1)https://www.cengage.com/cgi-wadsworth/course_products_wp.pl?fid=M20b&product_isbn_issn=9781111531041 Or
(2) https://cran.r-project.org/web/packages/wooldridge/wooldridge.pdf