

## Probability and Statistics (UMA-XXX)

### Experiment 1: Basics of R programming

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We hope you already have R and RStudio installed in your computers. Good luck with your programming in R! Let us start with the very basics of R programming here in our first Lab :)

If this is the first time, you are using R, then there is a lot to explore. You can try making codes for the following problems. This will give you a general idea of how to use R and over the next few labs you will learn more.

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- (1) Create a vector  $c = [5, 10, 15, 20, 25, 30]$  and write a program which returns the maximum and minimum of this vector.
  - (2) Write a program in R to find factorial of a number by taking input from user. Please print error message if the input number is negative.
  - (3) Write a program to write first  $n$  terms of a Fibonacci sequence. You may take  $n$  as an input from the user.
  - (4) Write an R program to make a simple calculator which can add, subtract, multiply and divide.
  - (5) Explore plot, pie, barplot etc. (the plotting options) which are built-in functions in R.
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