

## R assignment 8.9

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20th November 2020

Write a code, either in a R script or in a RStudio notebook, to solve the exercise. Submit your script (.R file extension) or notebook (.html or .pdf file extension) at the link above by the indicated deadline. This is a graded exercise that will count towards your final grade.

Assume that we have registered the height and weight for four people: Heights in cm are 180, 165, 160, 193; weights in kg are 87, 58, 65, 100. Make two vectors, height and weight, with the data. The bodymass index (BMI) is defined as (weight in kg)/(height in m)<sup>2</sup>.

Make a vector with the BMI values for the four people. Make a vector with actual weights for those people who have a BMI larger than 25.

```
height_in_cm = c(180, 165, 160, 193)    #creating a vector for heights and assigning the values to height_in_cm object

weights_in_kg = c(87, 58, 65, 100)      #creating a vector for weights and assigning the values to weights_in_kg object

height_in_metres = height_in_cm/100    #As the height given is in centimetres, we will convert it to metres to apply the BMI formula= (weight in kg)/(height in m)2.

height_in_metres    #printing heights in metres for all the 4 people

## [1] 1.80 1.65 1.60 1.93

BMI = round((weights_in_kg/(height_in_metres2)),2) #implementing the formula by dividing the weight by square of height in metres and then rounding it to 2 decimal places
BMI

## [1] 26.85 21.30 25.39 26.85

BMI_result = weights_in_kg[c(BMI>25)]    #created an another vector BMI_result which stores the weights of the people whose BMI>25
BMI_result

## [1] 87 65 100
```

Conclusion: The weights of the three people out of 4 have BMI > 25 with resultant weights of 87kg, 65kg and 100kg