class06

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```
grade <- function(file.name) {</pre>
    file <- read.csv(file.name) # read in the gradebook csv file
    for (i in 1:nrow(file)) { # loop through the students
      student <- file[i,2:6] # isolate grades in a vector w/o col X</pre>
      student[is.na(student)] <- 0 # make NA values into a 0</pre>
      student <- as.matrix(student) # made into a matrix to avoid order error</pre>
      avg.grade <- mean(student[order(student)][2:(length(student))])</pre>
      # avg. grade puts the grades in order then removes the first (lowest) grade
      # and averages the rest, storing this value in avg.grade
      student <- data.frame(student) # converts bac into a dataframe</pre>
      file[i,"avg.grade"] <- avg.grade # puts the average grade in a new column
    }
    print(file)
  }
  grade("C:/Users/echamieccase/Desktop/student_homework.csv")
            X hw1 hw2 hw3 hw4 hw5 avg.grade
   student-1 100
                   73 100
                           88
                               79
                                       91.75
1
   student-2 85
                       78
2
                   64
                           89
                               78
                                       82.50
3
   student-3 83
                   69
                       77 100
                               77
                                       84.25
  student-4 88 NA
                      73 100
                               76
                                       84.25
                               79
                                       88.25
  student-5 88 100
                      75
                           86
                                       89.00
   student-6 89 78 100
                           89
                               77
   student-7 89 100
                                       94.00
                       74
                           87 100
   student-8 89 100
                       76
                           86 100
                                       93.75
    student-9 86 100
                      77
                           88
                               77
                                       87.75
10 student-10 89
                                       79.00
                  72
                      79 NA 76
11 student-11 82
                  66
                      78 84 100
                                       86.00
12 student-12 100 70
                      75
                           92 100
                                       91.75
```

92.25

13 student-13 89 100 76 100 80

```
14 student-14
               85 100
                        77
                             89
                                 76
                                        87.75
                                        78.75
15 student-15
               85
                    65
                        76
                             89
                                 NA
16 student-16
               92 100
                        74
                             89
                                 77
                                        89.50
17 student-17
                                 78
                                        88.00
                88
                    63 100
                            86
                                        94.50
18 student-18
                91
                    NA 100
                             87 100
19 student-19
                                        82.75
               91
                    68
                        75
                             86
                                 79
20 student-20
               91
                    68
                        76
                             88
                                 76
                                        82.75
  gradebook <- grade("C:/Users/echamieccase/Desktop/student_homework.csv")</pre>
            X hw1 hw2 hw3 hw4 hw5 avg.grade
    student-1 100
                                 79
                                        91.75
1
                    73 100
                            88
2
   student-2 85
                    64
                        78
                            89
                                 78
                                        82.50
                                        84.25
3
   student-3
               83
                    69
                        77 100
                                 77
4
                                        84.25
   student-4
               88
                        73 100
                                 76
                   NA
5
   student-5
                                 79
                                        88.25
               88 100
                        75
                             86
6
                                 77
                                        89.00
    student-6
               89
                    78 100
                             89
7
   student-7
                89 100
                        74
                             87 100
                                        94.00
    student-8
               89 100
                        76
                            86 100
                                        93.75
                                        87.75
    student-9
               86 100
                        77
                             88
                                 77
10 student-10
               89
                    72
                        79
                            NA
                                 76
                                        79.00
11 student-11
               82
                    66
                        78
                            84 100
                                        86.00
12 student-12 100
                    70
                        75
                             92 100
                                        91.75
13 student-13
               89 100
                        76 100
                                 80
                                        92.25
14 student-14
                        77
                                        87.75
               85 100
                             89
                                 76
15 student-15
               85
                    65
                        76
                            89
                                 NA
                                        78.75
16 student-16
               92 100
                        74
                                 77
                                        89.50
                             89
17 student-17
                                        88.00
               88
                    63 100
                            86
                                 78
18 student-18
                    NA 100
                            87 100
                                        94.50
               91
19 student-19
               91
                        75
                                 79
                                        82.75
                    68
                             86
20 student-20
               91
                    68
                        76
                            88
                                 76
                                        82.75
  gradebook[is.na(gradebook)] <- 0</pre>
  # question 2 (student with highest grade):
  print(paste('student', which.max(gradebook[["avg.grade"]])))
```

```
# question 3 (homework with lowest score):
print(paste('homework',which.min(list(mean(gradebook$hw1),mean(gradebook$hw2),mean(gradebook$hw2),mean(gradebook$hw2)
```

[1] "homework 2"