

3. College

In the Cube College the students are taught in small groups. The individual groups are identified with colours. The groups are rated based on their students' average after handing out the semester reports. The statistical data are also displayed on the home page of the institute. In the following exercise you have to create this report.

Solve the following exercises using a spreadsheet processor.

During the solution take the followings into consideration.

- *Whenever possible, use a formula, function or reference in the solution in order to get the required results even if the basic data are changed.*
- *There are parts in the exercise that use the results from a previous question. If you could not solve an exercise part completely, use its solution as it is, or instead of a formula resulting in a number enter a reasonable result and work on with that. This way you can receive marks for that exercise part as well.*
- *You can use auxiliary cells to the right of column W if required.*

1. Import file `coll.txt`, which is a UTF-8 encoded text file tagged by tabs, into the spreadsheet processor starting from cell `A1`. Save it as `college` in the default format of the spreadsheet processor.
 2. In column `T` determine the average of the marks for each student. The average of the marks is 1 if the student received a fail (1) mark from any subject, otherwise it is the arithmetic mean of the marks.
 3. In column `U` rate the students based on their average. The rating for an average below 2.00 is fail, above 2.00 satisfactory, above 2.75 mediocre, above 3.75 good, above 4.50 exemplary and 5.00 is excellent. You may use auxiliary cells or perform auxiliary calculations in the solution of the exercise if required.
 4. In the corresponding cells of row 28 determine the average number of justified and unjustified absences, the subject averages and the college average based on the subject averages.
 5. Create the second row shown in the example in row 29 of the table. The cells from column `D` to column `S` should follow the changes in the first row. Type the content shown in the example into cells `B29`, `C29` and `T29`.
 6. Type the names of the groups into range `B30:B33`.
 7. In range `C30:C33` determine the number of students in each group.
 8. In range `D30:S33` determine the absence and subject averages of the students of each group using a formula that can be copied flawlessly.
 9. In range `T30:T33` calculate the group averages based on the subject averages.
 10. Format the cells of range `B28:T33` according to the example. Display the averages of the marks with an accuracy of two decimal digits. Upon setting the column widths and row heights pay attention to every data being fully visible. The width of columns `F:T` should be the same. The width of columns `B:E` should be (approximately) twice as much. Use a double-line border around ranges `B28:T28` and `B30:T33`.
-

11. Create a chart that shows the group averages in the way shown in the example. Set the scale of the value axis according to the example. Set the colours of the columns in accordance with the names of the groups. The width of the chart should be the same as the width of the data above it.

30 marks

