

This is NOT a group project. While discussion with other students is encouraged, all work submitted for credit, however, must be your own. Any evidence of plagiarism or other forms of scholastic dishonesty will be grounds for a failing grade in the course.

### Problem Statement

You are given an input data file consisting of marks for SKMM 1503 Engineering Drawing course for Semester I 2012/2013 in the following format, as in Figure 1:

<Matric>	<Man>	<CAD>	<T1>	<T2>	<T3>	<Proj>
A12KM0110	52	83	93	32	56	86
A12KM0112	51	80	84	40	49	88
A12KM0113	47	80	85	46	55	86
:	:	:	:	:	:	:
:	:	:	:	:	:	:

Figure 1: Input data file contents

where the columns represent,

- <Matric> – student’s matric number;
- <Man> – Manual drawing mark in percentage;
- <CAD> – CAD drawing mark in percentage;
- <T1>, <T2>, <T3> – test 1, 2 and 3 marks in percentage;
- <Proj> – project mark in percentage.

The calculation of final score is based on the following scheme:

- Manual drawing – 20%
- CAD drawing – 10%
- Tests – 40 % (10% each for test 1 and 2, and 20% for test 3)
- Project – 30%

### Task

Write a FORTRAN program to read all the data in the specified file (project1.txt, available on class portal) and create an output file showing the following results, as in Figure 2:

1. A list of score, rounded to the nearest integer, including grade sorted from highest to lowest.
2. Statistics of results: number of students, number of students who receive a particular grade, average score and grade.

### Project report submission

1. This project report must be presented in a standard technical report format. The content must include introduction, algorithm and flowchart, results (program output) and discussion including program verification, and conclusion.
2. Report is to be type-written and printed on A4-sized papers.
3. Fully commented source codes of the computer programs developed for the project must also be handed in, copied on to a CD and attached to the report. No mark will be given if the program softcopy is not submitted.
4. Please include the following statement in the first page of the project submission. No mark will be given if this statement is not included.

I, *full name*, hereby declare that this project submission is a product of my own effort. I acknowledge that academic disciplinary action can be taken if this submission is a result of plagiarism or other form of scholastic dishonesty.

Yours Truly,  
*Your signature and date*

No	Matric	Manual	CAD	Test	Project	Score	Grade
:	:	:	:	:	:	:	:
16	A12KM0110	16.0	9.2	23.6	25.8	75	A-
17	A12KM0123	15.1	9.0	23.7	25.2	73	B+
:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:

Statistics of result  
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Total number of students: 26  
Average score: 76  
Average grade: A-

Number of A+ : 0  
Number of A : 8  
Number of A- : 8  
: : :  
Number of E : 0

Figure 2: Sample required output file.