

4 evaluation criteria: C = clarity, A = availability, S = students involvement, E = efficiency

NSTUD = number of students: $1 \leq \text{NSTUD} \leq 42$

NPROF = number of professors: $2 \leq \text{NPROF} \leq 15$ (one prof. \leftrightarrow one course)

N EQU 630 $(630 = \overset{\text{max stud.}}{42} \times \overset{\text{max prof.}}{15})$

SCORES DW N DUP(?) \leftarrow input array (all scores of all professors)

\rightarrow actually, it has been used a bigger array to leave the last entry equal to all zeros

ENTRY: [1] [0]

P	P	P	P	C	C	C	A	A	A	S	S	S	E	E	E
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P = prof. code [1-15]

\rightarrow if P = 0000 \Rightarrow non-valid entry

if xxx = 000 \Rightarrow student doesn't vote for criterion X

For each professor, compute average evaluation

- for each criterion
- global PS

AVERAGES' FORMAT: 1 BYTE

xxx.yyyy

\rightarrow 5 BITS (FRACTIONAL)
 \rightarrow 3 BITS (INTEGER)

COMPUTE AVERAGE FOR EACH CRITERION: SUM_crit, COUNT_crit.

SUM_crit = MAX points for each criterion = 252 \rightarrow 1 BYTE (for each prof.)

COUNT_crit = MAX students voting for one professor (for one criterion) = 42 \rightarrow 5 BITS

INTEGER PART = 3 BITS \Rightarrow 8 BITS (SUM_crit), 5 BITS (COUNT_crit)

FRACTIONAL PART = 5 BITS \Rightarrow 5 BITS (SUM_crit), 0 BITS (COUNT_crit)

AH AL DL

0	0	0	I	I	I	I	I	I	I	F	F	F	F	F	F
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

:

0	0	0	I	I	I	I
---	---	---	---	---	---	---

AL
 RESULT:

x	x	x	y	y	y	y
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COMPUTE GLOBAL PS: $SUM = \sum SUM_crit_i$, $COUNT = \sum COUNT_crit_i$

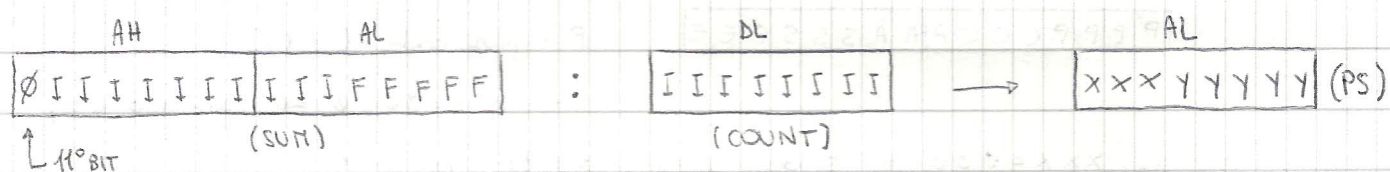
MAX value of SUM = $252 * 4 = 1008 \rightarrow$ REPRESENTABLE ON 10 BITS

↑
↑ #criteria
— max for each criterion

MAX number of voting students (COUNT) = $42 * 4 = 168 \rightarrow$ REPRESENTABLE ON 8 BITS

SUM: 11 BITS (INTEGER), 5 BITS (FRACTIONAL)

COUNT: 8 BITS (INTEGER), 0 BITS (FRACTIONAL)



Supporting variables:

COMPUTATIONS DB $15 * 9$ DUP(0) [actually $16 * 9$ to leave the last entry equal to all zeros]

↑ one entry for each professor (each entry \rightarrow 9 BYTES)

[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
PROF. CODE	ΣC	ΣA	ΣS	ΣE	Nc	Na	Ns	Ne

RESULTS DB $15 * 6$ DUP(0) [actually $16 * 6$ to leave the last entry equal to all zeros]

↑ one entry for each professor (each entry \rightarrow 6 BYTES)

[0]	[1]	[2]	[3]	[4]	[5]
PROF. CODE	AC	AA	AS	AE	PS

SUM DW 0 ; sum of votes of all criteria for the current professor (used to compute PS)

COUNT DB 0 ; students voting for the current professor (used to compute PS)

MAX DP 2 DUP(0) ; used to compute the max value of PS

MAX[0] = PROF. CODE, MAX[1] = VALUE OF PS MAX