

Taylor Vardock

HW 12

SECTION 002

5.26, 5.28

5.26) INPUT: EQUALITY CONSTRAINTS, INEQUALITY CONSTRAINTS  
OUTPUT: SATISFIABLE OR NOT

INITIALIZE ALL VARIABLES TO ARBITRARY DIFFERENT VALUES.

FOR EACH EQUALITY:

ASSIGN RIGHT SIDE TO VALUE OF LEFT SIDE

FOR EACH INEQUALITY:

IF NOT SATISFIED:

RETURN "NOT SATISFIABLE"

RETURN "SATISFIABLE"

WHERE EQUALITIES =  $N$  AND INEQUALITIES =  $M$ , IT IS  $O(N+M)$ .

5.28)

FOR EACH PERSON PAIR:

ADD TO ADJACENCY LIST

WHILE CHANGE:

FOR EACH PERSON IN ADJ. LIST:

IF PARTY LIST SIZE  $\leq 5$  OR PARTY LIST SIZE  $> \text{NUM PEOPLE} - 5$ :

REMOVE PERSON FROM ALL LISTS

RETURN ALL KEY VALUES IN ADJ. LIST

COMPLEXITY:  $O(N^2)$ .