

Algorithms Assignment 2

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PSEUDOCODE and BIG OH

COMPLETED QUESTION 1:

INPUT: a graph "g" with people as vertices and edges meaning dislike between people

OUTPUT: a list "g1" and a list "g2" of the two separate groups

```
g1 <- empty list                                1
g2 <- empty list                                1
FOR n UNTIL total people                        n+1
    enemy <- check adjacent vertices of graph    n
    IF (n has no enemies in group 1) THEN          m
        Add n to group 1                          n
    ELIF (n has no enemies in group 2) THEN        m
        Add n to group 2                          n
    ELSE
        PRINT Group separation not possible        1
        Kill program                               1
    END IF
END FOR
RETURN g1, g2                                  1
```

Time Complexity: $O(nm)$

Sample Output Screenshot



```
animungre@100615309Ubuntu:~/Repositories/ExpeditionGroups$ node expedition.js data1.txt
INPUT DATA:
1 0 0 1 0
0 1 1 0 1
0 1 1 1 1
1 0 1 1 0
0 1 1 0 1
Group 1: 0,3
Group 2: 1,2,4
```