CSE331 COMPUTER ORGANIZATION HW1 REPORT

ALGORITHM

```
1   while(isEmptysetArr() == 0){
2       for(i = 0; i < setArr.size(); i++){
3           if(setArr[i] != 'N') {
4               for(j = 0; j < subsetArr.size(); j++){
5               if(subArr[j] == '.'){
6                   intersect(); //jump to the next index of subsetArr
7               }
8               else if(subArr[j] == '!'){
9                   pass(); //jump to the next subset of subsetArr
10              }
11              for(k = 0; k < subsetSizes[j]; k++){
12                  if(setArr[x] == subsetArr[j*k]){
13                      intersectionArr[j]++;
14                  }
15              }
16          }
17      }
19      int max = findMaxValueintersetcionArr(); //index of the max intersection set
20      int intersected[] = takeSubset(max); //take the max intersected subArr
21      subsetArr[max] = '!'; //change the dot the head of the itersected arr
22      subtractArrs(setArr[], intersected[]); //subtract the intersected arr from setArr
23      putN(setArr[]); //putting 'N's into the setArr after the subtraction
24      resetIntersectionArr(); //resetting intersectionArr with 0's
25  }
26  printSubsets();
```

explained algorithm

1- read files and fill the appropriate variables with appropriate values
2- take the number of intersection's between setArr and subsetArr
3- take the max intersected subsetArr
4- change the dot of the beginning of the subsetArr to the exclamation mark
5- subtract that subsetArr from setArr and put 'N's to the subtracted values in setArr
6- reset intersectionArr
7- for printing the min sets:
    a. find the exclamation marks in the subsetArr
    b. print these values after the exclamation marks

set.txt file format

you have to put the numbers seperated with comma. when it's done, you have to put dot to the end of the file. be careful there is no newline or any other character except dot.

subset.txt file format

let's assume, you are gonna test these subsets:

1,2

2,3

3,4,5

1,2,3

you have to put dot's to the beginning of the subsets and seperate them with the comma and you have the put the "-" sign to the end of the file.

subset.txt = .1,2.2,3.3,4,5.1,2,3-

warning! when you are testing the code, please fill the sets and subsets between [0,10).

output samples

1- subsets : (1,2) (3,4) (1,2,3) (1,4)

```
1,2,3,4,

1,2,3,
1,4,
-- program is finished running --
```

2- subsets: (1,2) (2,4) (1,2,3) (1,4)

```
1,2,3,4,

1,2,3,
1,4,
-- program is finished running --
```