Problem 01

You are given a string S of (0-1) , (a-z) and (A-Z) . Now tell that whether the string is a binary string or not
Note – A binary string is a string that contains only 0 and 1.
Print YES if the string is a binary string otherwise print NO.
Note – Implement it using function

Sample Input 1:
aB1Bsi1001sd

Sample Output 1:
NO

Sample Input 2:
0011110

Sample Output 2:
YES

Problem 02

Print the following pattern (Implement it using function)

For example n = 4

```
2
3 5
7 11 13
17 19 23 29
```

Sample Input :

6

Sample Output :

```
2
3 5
7 11 13
17 19 23 29
31 37 41 43 47
53 59 61 67 71 73
```

Problem 03

You are given m strings of small or capital letters, now concatenate the given strings.
The first line of the input will contain a single positive integer m , then the next m lines will contain a strings.
In the time of concatenation give a space after each word. See the sample output for more clarification.
Note – Implement it using function

Sample Input :

4
Think

And

Grow

Rich

Sample Output :

Think And Grow Rich

Problem 04

Write a C program to take one positive integer **N**, the size of an array as input. Then take a positive integer array of size **N** as input and sort the array in ascending order. The input array may contain duplicate integers.

Note – It is possible to sort an array without any sorting algorithm. Hence for this problem you can't use any sorting algorithm.

Note – Implement it using function

Sample Input 1:
5
6 1 5 5 17

Sample Output 1:
1 5 5 6 17

Sample Input 2 :
7
5 2 2 7 7 1 7

Sample Output 2:
1 2 2 5 7 7 7

Problem 05

You are given two matrix of size NxM where N is the row number and M is the column number. Now first line of the input will contain the value of N and M , and the next two line will contain the two matrix, Now perform matrix multiplication operation.

Note – Implement it using function

Sample Input:

3 3

1 2 3
4 5 6
7 8 9

1 2 3
4 5 6
7 8 9

Sample Output:

30 36 42
66 81 96
102 126 150

Problem 06

There's a chessboard of size 8×8 . R rooks are placed on it and all others cells are empty. Now , if the row or column number of two rooks are same they will attack each other and will vanish from the chessboard. It is guaranteed that If you randomly choose two or more rooks from the given input at most two rooks column or row number will be same.
Now you need to tell how many rooks will safe at the end along with their location?
The first line of the input will contain a single positive integer R, The next line will contain the position of the R rooks in this (x,y) format where x is the row number of the rook and y is the column number of the rook.
Note – Here row and column starts from 1.

Note – Implement it using function

Sample Input :

4

1 2
3 3
2 4
3 1

Explanation – Here (3,3) and (3,1) location rooks will attack each other.

Sample Output :

Safe rooks – 2
1 2
2 4

Codeforces Problem Link –

1) https://codeforces.com/problemset/problem/1760/A
2) https://codeforces.com/problemset/problem/1740/A
3) https://codeforces.com/problemset/problem/1734/B