ASSIGNMENT 1: Operations on Polynomials

You need to perform this assignment in groups of two. Only one of the members need to submit the same code on moodle as well as on hackerrank.
Languages allowed: C / C++.
Max marks: 15
Deadline for the assignment is 21 January 2018, 11:30 P.M.

Statement:

Given two polynomials ***P*** & ***Q*** with number of terms **x** and **y.** *Y*ou need to perform addition and multiplication on them using **global arrays(only)** as discussed in the class.
Construct a struct ***Term*** containing Co-efficient(float) and Degree(Integer) of a single term in any polynomial.
Make a global array ***ARR*** of *Terms* of size 250.
ARR format will be like:

Index	0		x-1	x		x+y-1	Store	Ans	From	Here
Degree	Pstart	...	Pend	Qstart	...	Qend	Free	...	...	
Coeff.										

Constraints:
Degree(p) < 50.
Degree(q) < 50.

Input Format:
All input is from the STDIN.
The input will have 6 lines.
No. of terms in polynomial p.
Degrees of the polynomial p.(need not to be in a specific order)
Coefficients of polynomial p respectively.
No. of terms in polynomial q.
Degrees of the polynomial q.(need not to be in a specific order)
Coefficients of polynomial q respectively.

Example:
2
2 1
1 2
2
0 1

2 3

Output Format:

All otputs are to STDOUT.
Output has 4 lines.
List of degrees of polynomial addition in descending order(space separated).
List of coefficients polynomial addition respectively(space separated).
List of degrees of polynomial multiplication in descending order(space separated).
List of coefficients polynomial multiplication respectively(space separated).

Example:
2 1 0
1 5 2
3 2 1
3 8 4

Explaination:

Here, $p = x^2 + 2x$, $q = 3x + 2$

Addition = $x^2 + 5x + 2$

Multiplication = $3x^3 + 8x^2 + 4x$

Submission Details:

Each student should create an account on www.hackerrank.com strictly with their IITD email address. Submission made from any other email address would not be graded. The link for problem submission and evaluation is: www.hackerrank.com/assignment1-col106

You may try as many times as you want, we'll consider your best submission for evaluation. Additionally, also submit your code on moodle.

Demos for Assignment 1 will be held soon after the deadline between 21st-31st January. A google spreadsheet to fill convenient demo slots will soon be floated.