Algorithm PA2 Report
B07303024 經濟三 李品樺

- Data structures used in the program: Vector, Pair
- Findings:
● Store Input Data

First of all, we know that maximum planar subset is a DP problem, therefore we need two tables to store the output value that we want. Also, we need to find out the start point and the end point of each chord for many times, so it is important that how we store the input data. In this case, we use "a vector of pairs" to store the data as below:

Start point	0	1	2	3	4	5
End point	4	2	1	5	0	3

For example if the input data is:

0,4

1,2

3,5

Then, we store the correspond pairs: (4,0)(2,1)(5,3). Remember that every column of the table is a pair, and the entire table is a vector. In this way, we can easily access the chord by simply using the command. For example, vector[0].first = 0, vector[2].second = 1, etc.

● Find Chords

Secondly, m table is for storing the maximum chords, which is also the first line of the output result. Another table is the s table, which is used to indicate which case we use to find out the result. Therefore, once we have the two tables, we can output the m[0][n-1] as the first line of the output, and use the s table to trace back the chords. If we use another table to store all the correspondent output, then it may take to much time and memory. So, in this case, we use the "FindChord" function, which and recursively call itself in order to trace back the chords by using the s table. Note that we only need to save the start point of the chord because that we already have the input data which can hselp us match another point by using vector[i].second.