1001. Compute degrees using adjacency list

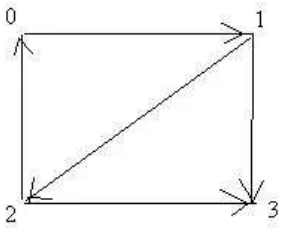
Total: 92 Accepted: 82

Time Limit: 1sec Memory Limit:256MB

Description

Given an adjacency list representation of a graph, output all the degrees of the vertices.

```
struct  ALGraph{

    vector<list<int> > adj; //adjacency list of the graph

    int vexnum;// number of vertices

    int arcnum;//number of edges

    //A  simple initialization.

   ALGraph(int n=0):vexnum(n){
       list<int> l;
       adj.resize(n,l);
   }

} ;

vector<pair<int, int> > degree(const ALGraph &g);

// returns a list of indegrees and outdegrees for all vertices

 ALGraph mkALGraph(const char * f);

/*

 It returns an object of ALGraph given by the file f which contains the adjacency list of a graph.

The first line is the number of vertices.

The next n lines is the adjacency list. The first number is the number of the vertex, then its adjacency vertices followed and -1 signals the end of the list of adjacency list. For example, the following gives a  graph  and its representation:
```




```
4

0  1  -1

1  2 3 -1

2 0 3 -1

3 -1
```

The function returns an object of type ALGraph representing the graph.

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Hint

Design your own test data. No testing program is provieded at the moment.

Problem Source: Graph Algorithms

Problem Source: Graphs

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