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1: #include<stdio.h>
2: #include<stdlib.h>
3: static int m=0;
4: int pre[11];
5: int post[11];
6: struct node{
7:     int dest;
8:     struct node* next;
9: };
10: struct adj_list{
11:     struct node* head;
12:
13: };
14: struct graph{
15:     int v;
16:     struct adj_list* array;
17:     int* visited;
18:     int* parent;
19: };
20: struct node* cnode(int dest){
21:     struct node* temp=(struct node*)malloc(sizeof(struct node));
22:     temp->dest=dest;
23:     temp->next=NULL;
24:     return(temp);
25:
26:
27: }
28: struct graph* cgraph(int v){
29:     struct graph* gr=(struct graph*)malloc(sizeof(struct graph));
30:     gr->v=v;
31:     gr->array=(struct adj_list*)malloc(v*sizeof(struct adj_list));
32:     gr->visited=(int *)malloc(v*sizeof(int));
33:     gr->parent=(int*)malloc(v*sizeof(int));
34:     int i=0;
35:     for(i=0;i<v;++i){
36:         gr->array[i].head=NULL;
37:         gr->visited[i]=0;
38:         gr->parent[i]=-1;
39:     }
40:     return(gr);
41: }
42: void add_edge(struct graph* gr,int src,int dest){
43:     struct node* temp1=cnode(dest);
44:     temp1->next=gr->array[src].head;
45:     gr->array[src].head=temp1;
46:     struct node* temp2=cnode(src);
47:     temp2->next=gr->array[dest].head;
48:     gr->array[dest].head=temp2;
49: }
50: void dfs(struct graph* gr,int s){
51:     struct node* temp=gr->array[s].head;
52:     gr->visited[s]=1;
53:     pre[s]=m++;
54:     while(temp!=NULL){

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55:         int k=temp->dest;
56:         if(gr->visited[k]==0){
57:             dfs(gr,k);
58:         }
59:         temp=temp->next;
60:     }
61:     post[s]=m++;
62: }
63:
64: void cycle(){
65:
66: }
67: int main(){
68:
69: struct graph* gr = cgraph(11);
70:     add_edge(gr, 1,4);
71:     add_edge(gr, 1,3);
72:     add_edge(gr, 1,2);
73:     add_edge(gr, 2,1);
74:     add_edge(gr, 2,3);
75:     add_edge(gr, 3,1);
76:     add_edge(gr, 3,1);
77:     add_edge(gr, 4,1);
78:     add_edge(gr, 4,5);
79:     add_edge(gr, 4,8);
80:     add_edge(gr, 5,6);
81:     add_edge(gr, 5,7);
82:     add_edge(gr, 6,5);
83:     add_edge(gr, 6,8);
84:     add_edge(gr, 6,9);
85:     add_edge(gr, 7,5);
86:     add_edge(gr, 6,7);
87:     add_edge(gr, 8,9);
88:     add_edge(gr, 9,10);
89:     dfs(gr,4);
90:     for(int i=1;i<11;i++){
91:         printf(" %d --> [%d ,%d]\n",i,pre[i],post[i]);
92:     }
93:
94: return 0;
95: }

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