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/*Take inputs of a graph and generate Adjacency Matrix of the graph. Print Indegree,
Outdegree and Total degree of each node.*/
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
    int ch,no,matrix[30][30],i,j,in_d=0,out_d=0;
    char dec;
    clrscr();
    do
    {
      printf("\t Menu ");
      printf("\n\t 1. Adjacency Matrix Of The Graph(Input)");
      printf("\n\t 2. In-Degree Out-Degree Total-Degree");
      printf("\n\t 3. Exit");
      printf("\n\t Enter Your Choice:- ");
      scanf("%d",&ch);
      switch(ch)
      {
            case 1:
                  printf("\n How Many Vertices ? : ");
                  scanf("%d", &no);
                  for(i=1;i<no+1;i++)
                  {
                        for(j=1;j<no+1;j++)
                        {
                              if(i==j)
                              {
                                    matrix[i][j]=0;
                                    continue;
                              }
                              else
                              {
                                    getchar();
                              printf("\n\t Vertices %d & %d are Adjacent ? (Y/N) :",i,j);
                                    scanf("%c",&dec);
                                    if(dec=='Y' || dec=='y')
                                    matrix[i][j]=1;
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                                        else
                                                matrix[i][j]=0;
                                }
                        }
                }
                break;

        case 2:
                system("cls");
                printf("\n Vertex \t In_Degree \t Out_Degree \t Total_Degree ");
                for(i=1;i<=no;i++)
                {
                        in_d=out_d=0;
                        for(j=1;j<=no;j++)
                                if(matrix[j][i]==1)
                                        in_d++;
                        for(j=1;j<=no;j++)
                                if(matrix[i][j]==1)
                                        out_d++;
                printf("\n\n %5d\t\t\t%d\t\t%d\t\t%d\n\n",i,in_d,out_d,in_d+out_d);
                }
                break;
    }
  }while(ch!=3);
}
```