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Lab-01

① //

```cpp
#include <conio.h>
#include <iostream.h>
#define MAX 10
int n;


Class router {
Char adj_new[MAX], adj_old[MAX];
int table_new[MAX], table_old[MAX];
    Public:
    router() {
    for (int i=0; i<max; i++) table_old[i]= table_new[i]=99;
    }

Void copy() {
    for(int i=0; i<n; i++) {
       adj_old[i] = adj_new[i];
    }}
    int evual() {
    for(int i=0; i<n; i++)
    if (table_old[i]!= table_new[i] || adj_new[i] != adj_old[i])
       return 0;
       return1;
    }

    Void input (int j) {
    cout <<"Enter 1 if coo.router is adj. to router"
    <<(char)('A'+j)<<" else enter 99:"<<endl<<''
    for (int i=0; i<n; i++)
       if (i!=j)  cout << (char)('A'+i)<<"";
          cout << "\n Enter matrix:";
```

```
for (i=0; i<n; i++) {
    if (i==j)
    table_new[i]=0;
     else
    cin>> table_new[i];
    adj_new[i] = (char)('A'+i);
    }
    cout <<endl; }
  void display () {
    cout << "\nDestination router:";
  for (int i=0; i<n; i++) cout << (char('A'+i) << "",
  cout << "\nOutgoing line: ";
  for (i=0; i<n; i++) cout << adj_new[i] << " ";
  cout << "\nHop Count: ";
  for (i=0; i<n; i++) cout << table_new[i] << ""; }
  void build (int j) {
  for (int i=0; i<n; i++)
  for (int k=0; (i!=j) && (k<n); k++)
  if (table_old[i]!=99)
  if ((table_new[i] + d[i].table_new[k] < table_new[k]) {
  table_new[k] = table_new[i] + d[i].table_new[k];
  adj_new[k] = (char) ('A' + i);
  } }
  } d[10];
  void build_table() {
  int i=0, j=0;
  while (i!=n) {
  for (i=j; i<n; i++) {
    d[i].copy();
    d[i].build[i];
  }
```

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```
for (i=0; i<n; i++)
  if (!o[i].equal()) {
    j=i;
    break;
  }}}
void main() {
  closer();
  cout << "Enter the no. of Router ("<<'mAx<<"].
       "; cin>>n;
  for (int i=0; i<n; i++) r[i].input(i);
  build_table();
  for (i=0; i<n; i++) {
  cout << "Router Table entries for router" <<(war)
       ('A' + i) <<"'_"']
  r(i).display();
  cout << endl <<endl;
  }
    getch();
  }
```