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#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];
            table-old[i] = table-new[i];
        }
    }
    int equal() {
        for (int i = 0; i < n; i++) {
            if (table-old[i] != table-new[i] ||
                adj-new[i] != adj-old[i]) return 0;
        }
        return 1;
    }
    void input (int j) {
        cout << "Enter 1 if the corresponding
            Router is adjacent to Router"
            << (char) ('A' + j) << "else enter 99:"
            << endl << " ";
    }
};
```

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for(int i=0; i<n; i++)
if (i==j) cout << (char) ('A' + i) << " ";
    cout << "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;

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Void display() {
    cout << "Destination Route: ";
    for (int i=0; i<n; i++)
        cout << (char) ('A' + i) << " ";
    for (int i=0; i<n; i++)
        cout << adj_new[i] << " ";
    cout << "In Hop count: ";
    for (i=0; i<n; i++)
        cout << table_new[i] << " ";
}

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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] + g[i] + table_new[k])
                < table_new[k]) {
                table_new[k] = table_new[i] + g[i]
                    + table_new[k];
                adj_new[k] = (char) ('A' + i);
            }
}

```



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    r[i] = 0;
}

void buildtable() {
    int i=0, j=0;
    while (i != n) {
        for (j=i; i<n; i++) {
            r[i] = copy();
            r[i] = build();
        }
        for (i=0; i<n; i++)
            if (!r[i].equals(s)) {
                j=i;
                break;
            }
    }
}

```

```

void main() {
    clrscr();
    cout << "Enter no of routes" << n << endl;
    for (int i=0; i<n; i++) r[i] = input();
    buildtable();

    for (int i=0; i<n; i++) {
        cout << "Route table entries for" << endl;
        cout << "Route " << (char)('A'+i) << "A:" << endl;
        r[i].display();
        cout << endl << endl;
    }
    getch();
}

```