

计算关键路径的算法

```
void Graph_List::CriticalPath()
{
    int i, k, e, l;
    int n = graphsize;
    int* ve = new int[n];           // 事件的最早发生时间
    int* vl = new int[n];           // 事件的最迟发生时间
    for (i = 0; i < n; i++)         // 初始化数组 ve[]
        ve[i] = 0;
    for (i = 0; i < n; i++)         // (1) 按拓扑顺序计算各事件允许的最早发生时间
    {
        Edge *p = Head[i].adjacent;
        while (p != NULL)
        {
            k = p->VerAdj;
            if (ve[i] + p->cost > ve[k])
                ve[k] = ve[i] + p->cost;
            p = p->link;
        }
    }
    for (i = 0; i < n; i++)         // 数组 vl[] 初始化
        vl[i] = ve[n - 1];
    for (i = n - 2; i >= 0; i--)    // (2) 逆序计算事件的最迟发生时间
    {
        Edge* p = Head[i].adjacent;
        while (p != NULL)
        {
            k = p->VerAdj;
            if (vl[k] - p->cost < vl[i])
                vl[i] = vl[k] - p->cost;
            p = p->link;
        }
    }
    // (3) 求诸活动的最早开始时间和最迟开始时间
    for (i = 0; i < n; i++)
    {
        Edge* p = Head[i].adjacent;
        while (p != NULL)
        {
            k = p->VerAdj;
            e = ve[i];
            l = vl[k] - p->cost;
            if (l == e)
                cout << "<" << i << ", " << k << ">" << " is Critical Activity! " << endl;
            p = p->link;
        }
    }
    delete[] ve;
    delete[] vl;
}
```