算法 K（构造最优二叉查找树）

//给定 $2n+1$ 个非负的权$(p_1, \dots , p_n$；$q_0, \dots, q_n)$，本算法构造最优二叉树二叉树 $t\,(\,i\,,j\,)$，

//在上述定义下，对权 $(p_{i+1}, \dots, p_j$；$q_i, \dots, q_j)$ 有极小费用

```cpp
template <class T>
void BSTree<T>::OptimalBST(int p[],int q[], const int n )
{
    int c[n+1][n+1],w[n+1][n+1],r[n+1][n+1];
    for (i=0; i<=n; i++ )
    {
        c[i][i]=0;
        w[i][i]=q[i];
    }
    for ( d=1; d<=n; d++ )
        for ( i=0; i<=n-d; i++ )
        {
            j=i+d;
            w[i][j]=w[i][j-1]+p[j]+q[j];
            min=c[i+1][j];
            for ( k=i+1; k<=j; k++ )
                if ( c[i][k-1]+c[k][j]<min )
                    { min=c[i][k-1]+c[k][j]; m=k; }
            c[i][j] = w[i][j]+min;
            r[i][j] = m;
        }
}
```