OBST.C - Code::Blocks 20.03

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Start here | binary_search.c | OBST.C

```c
// BE20E05F062  AKASH SHRIDHARAN
#include<stdio.h>
#include<conio.h>
#define MAX 10

int main()
{

 char ele[MAX][MAX];
 int w[MAX][MAX], c[MAX][MAX], r[MAX][MAX], p[MAX], q[MAX];
 int temp=0, root, min, min1, n;
 int i,j,k,b;

 printf("Enter the number of elements:");
 scanf("%d",&n);
 printf("\n");
 for(i=1; i <= n; i++)
 {
  printf("Enter the Element of %d:",i);
  scanf("%d",&p[i]);
 }

       printf("\n");
 for(i=0; i <= n; i++)
 {
  printf("Enter the Probability of %d:",i);
  scanf("%d",&q[i]);
 }
 printf("W\t\tC\t\tR\n");
 for(i=0; i <= n; i++)
 {
 for(j=0; j <= n; j++)
 {
  if(i == j)
  {
  w[i][j] = q[i];
  c[i][j] = 0;
  r[i][j] = 0;
  printf("W[%d][%d]: %d\tC[%d][%d]: %d\tR[%d][%d]: %d\n",i,j,w[i][j],i,j,c[i][j],
  }
 }

}
 printf("\n");
```

C/C++ | Windows (CR+LF) | WINDOWS-1252 | Line 13, Col 1, Pos 239 | Insert | Read/Write | defa...

C:\Users\akash\Desktop\5th_sem_books&PPTs\DAA\DAA-lab-works\OBST.exe

```
Enter the number of elements:3

Enter the Element of 1:1
Enter the Element of 2:2
Enter the Element of 3:3

Enter the Probability of 0:12
Enter the Probability of 1:32
Enter the Probability of 2:34
Enter the Probability of 3:43
W               C               R
W[0][0]: 12     C[0][0]: 0      R[0][0]: 0
W[1][1]: 32     C[1][1]: 0      R[1][1]: 0
W[2][2]: 34     C[2][2]: 0      R[2][2]: 0
W[3][3]: 43     C[3][3]: 0      R[3][3]: 0

W[0][1]: 45     C[0][1]: 45     R[0][1]: 1
W[1][2]: 68     C[1][2]: 68     R[1][2]: 2
W[2][3]: 80     C[2][3]: 80     R[2][3]: 3

W[0][2]: 81     C[0][2]: 126    R[0][2]: 2
W[1][3]: 114    C[1][3]: 182    R[1][3]: 3

W[0][3]: 127    C[0][3]: 252    R[0][3]: 2

Minimum cost = 252
Root  = 2
```

Type here to search

AQI... ENG 12:01 27-11-2022

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```
38      r[i][j] = 0;
39      printf("W[%d][%d]: %d\tC[%d][%d]: %d\tR[%d][%d]: %d\n",i,j,w[i][j],i,j,c[i][j],
40      }
41    }
42
43  }
44  printf("\n");
45  for(b=0; b < n; b++)
46  {
47    for(i=0,j=b+1; j < n+1 && i < n+1; j++,i++)
48    {
49
50
51    if(i!=j && i < j)
52    {
53      w[i][j] = p[j] + q[j] + w[i][j-1];
54      min = 30000;
55      for(k = i+1; k <= j; k++)
56      {
57        min1 = c[i][k-1] + c[k][j] + w[i][j];
58        if(min > min1)
59        {
60          min = min1;
61          temp = k;
62        }
63      }
64      c[i][j] = min;
65      r[i][j] = temp;
66    }
67    printf("W[%d][%d]: %d\tC[%d][%d]: %d\tR[%d][%d]: %d\n",i,j,w[i][j],i,j,c[i][j],
68
69                }
70    printf("\n");
71  }
72
73
74  printf("Minimum cost = %d\n",c[0][n]);
75  root = r[0][n];
76
77  printf("Root  = %d \n",root);
78  getch();
79  }
80
```

C/C++ | Windows (CR+LF) | WINDOWS-1252 | Line 38, Col 15, Pos 688 | Insert | Read/Write | defa...

C:\Users\akash\Desktop\5th_sem_books&PPTs\DAA\DAA-lab-works\OBST.exe

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W[0][2]: 81     C[0][2]: 126    R[0][2]: 2
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