EXPERIMENT 9

INPUT:-

#include<bits/stdc++.h>

using namespace std;

int sum(int frequency[],int i,int j)

{

int sum=0;

for(int x=i;x<=j;x++)

sum+=frequency[x];

return sum;

}

int optimalcost(int frequency[],int i,int j)

{

if(j<i)

return 0;

if(j==i)

return frequency[i];

int frequencysum=sum(frequency,i,j);

int min=INT\_MAX;

for(int r=i;r<=j;++r)

{

int cost=optimalcost(frequency,i,r-1)+optimalcost(frequency,r+1,j);

if(cost<min)

min=cost;

}

return min+frequencysum;

}

int optimalsearchtree(int keys[],int frequency[],int n)

{

return optimalcost(frequency,0,n-1);

}

int main()

{

int keys[]={10,12,20};

int frequency[]={34,8,50};

int n=sizeof(keys)/sizeof(keys[0]);

cout<<"Cost of Optimal BST is: "<<optimalsearchtree(keys,frequency,n);

return 0;

}

OUTPUT:-

Cost of Optimal BST is: 142

--------------------------------

Process exited after 0.09872 seconds with return value 0

Press any key to continue . . .