SHELLSORT

#include <iostream>

#include <stdlib.h>

#include<time.h>

#define n 10

using namespace std;

void shellsort(int a[]);

void izpis(int a[]);

int main()

{

int x[n],i;

srand(time(NULL));

for(i=0;i<n;i++)

x[i] = rand()%(100);

izpis(x);

shellsort(x);

cout<<endl<<"pisemo novo tabelo\n";

izpis(x);

return 0;

}

void shellsort (int a[])

{

int i,j,k,l,s;

short x,b[5];

b[0]=9;

b[1]=5;

b[2]=3;

b[3]=2;

b[4]=1;

for (l=0;l<5;l++)

{

k=b[l];

for (i=k;i<n;i++)

{

x=a[i];

j=i-k;

while ((x<a[j]) && (j>=0) && (j<=n))

{

a[j+k]=a[j];

j=j-k;

}

a[j+k]=x;

}

}

}

void izpis(int a[])

{

for(int i=0;i<n;++i)

cout<<a[i]<<" ";

}

**Primer:**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **9. element** | **69** | **8** | **46** | **84** | **97** | **45** | **39** | **34** | **75** | **66** |
| **5. element** | **66** | **8** | **46** | **84** | **97** | **45** | **39** | **34** | **75** | **69** |
| **3. element** | **45** | **8** | **34** | **75** | **69** | **66** | **39** | **46** | **84** | **97** |
| **2. element** | **39** | **8** | **34** | **45** | **46** | **66** | **75** | **69** | **84** | **97** |
| **1. element** | **34** | **8** | **39** | **45** | **46** | **66** | **75** | **69** | **84** | **97** |
|  | **8** | **34** | **39** | **45** | **46** | **66** | **75** | **69** | **84** | **97** |