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Tugas Modul PAP-05

main.cpp

#include <iostream>

#include "pustaka.h"

using namespace std;

int main()

{

//Soal nomor 1

cout << "Soal nomor 1:" << endl;

int arr1[] = { 3, 5, 38, 0, 44, 47 };

compress\_array(arr1, 6);

int arr2[] = { 3, 0, 44, 38, 0, 5, 47 };

compress\_array(arr2, 7);

int arr3[] = { 2, 15, 0, 0, 0, 26, 27, 36 };

compress\_array(arr3, 8);

int arr4[] = { 15, 36, 27, 0, 0, 2, 26 };

compress\_array(arr4, 7);

cout<< endl;

//Soal nomor 2

cout << "Soal nomor 2:" << endl;

int arr5[] = { 3, 44, 38, 5, 47 };

selection\_sort(arr5, 5);

cout << endl;

int arr6[] = { 15, 36, 27, 2, 26 };

selection\_sort(arr6, 5);

cout << endl;

//Soal nomor 3

cout << "Soal nomor 3:" << endl;

int arr7[] = { 3, 44, 38, 5, 47 };

int arr8[] = { 15, 36, 27, 2, 26 };

selection\_sort2(arr7, 5);

cout << endl;

selection\_sort2(arr8, 5);

cout << endl;

//Soal nomor 4

cout << "Soal nomor 4:" << endl;

int arr9[] = { 3, 44, 38, 5, 47 };

get\_median(arr9, 5);

cout << "" ;

int arr10[] = { 15, 36, 27, 2, 26 };

get\_median(arr10, 5);

cout << endl;

return 0;

}

pustaka.cpp

#include <iostream>

#include "pustaka.h"

using namespace std;

//Soal nomor 1

void compress\_array(int n[], int size)

{

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

{

if(n[i] == 0)

{

n[i]= NULL;

}

else

{

cout << n[i] <<" ";

}

}

cout<< endl;

}

//Soal nomor 2

void selection\_sort(int n[], int size)

{

int i, j ,k , min;

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

{

min = i;

for(j = i+1; j < size; j++)

{

if(n[j] < n[min])

{

min = j;

}

}

k = n[i];

n[i] = n[min];

n[min] = k;

for(int y=0; y<size; y++)

{

cout<< n[y] << " ";

}

cout<< endl;

}

}

//Soal nomor 3

bool is\_it\_sorted(int data[], int jml\_data) {

bool isSorted = true;

int temp = 0;

for (int i=0; i<jml\_data+1; i++) {

if(temp>data[i]) {

isSorted = false;

}

temp=data[i];

}

return isSorted;

}

void selection\_sort2(int data[], int jml\_data) {

int i, j, x, y, min, temp;

x=0;

bool sorted = true;

for (i = 0; i < jml\_data - 1; i++) {

min = i;

for (j = i + 1; j < jml\_data; j++) {

if (data[j] < data[min]) {

min = j;

}

}

temp = data[i];

data[i] = data[min];

data[min] = temp;

sorted = is\_it\_sorted(data, jml\_data-1);

if(x==0) {

for(int i=0;i<jml\_data;i++) {

cout << data[i] << " ";

}

cout << endl;

if(sorted == true) {

x=1;

}

}

}

}

//Soal nomor 4

int get\_median(int n[], int size)

{

int i, j, k, min;

int median;

int terurut;

for(int y=0; y < size; y++)

{

if(n[y] > n[y+1])

{

terurut = false;

}

else

{

terurut = true;

}

}

if(terurut == 0)

{

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

{

min = i;

for(j = i+1; j < size; j++)

{

if(n[j] < n[min])

{

min = j;

}

}

k = n[i];

n[i] = n[min];

n[min] = k;

}

cout << n[size / 2] << endl;

}

if(terurut == 1)

{

cout << n[size / 2] << endl;

}

}

pustaka.h

#ifndef PUSTAKA\_H\_INCLUDED

#define PUSTAKA\_H\_INCLUDED

//Soal nomor 1

void compress\_array(int n[], int size);

//Soal nomor 2

void selection\_sort(int n[], int size);

//Soal nomor 3

void selection\_sort2(int data[], int jml\_data);

//Soal nomor 4

int get\_median(int n[], int size);

#endif // PUSTAKA\_H\_INCLUDED

Hasil coding:

A screenshot of a computer

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