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Binary Search

#include <iostream>

#include <stdlib.h>

using namespace std;

int binary\_search(int[], int, int );

char pil;

main () {

do {

cin.clear();

system("cls");

const int array\_size=10;

int array [array\_size]={0,6,9,12,20,23,29,32,47,79};

cout << "\*\*\*\*\*\*\*\*\*\*\*\* Binary Search \*\*\*\*\*\*\*\*\*\*\*\*" << endl;

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cout << "\n Data dalam Array adalah = " << endl;

cout << "\n Array : " << "\t\t Data : " << endl;

for (int count = 0; count < array\_size; count++){

cout << "\t" << " array ["<< count <<"]" << "\t\t";

cout << array [count] << endl;

}

int searching\_element = 0;

int flag = 0;

cout << "\n\n Masukkan Data yang Anda Cari = ";

cin >> searching\_element;

flag = binary\_search (array, array\_size, searching\_element);

if (flag!=-1)

cout << "\n Data ditemukan pada posisi Array ["<< flag <<"]" << endl;

else

cout << "\n Data tidak ditemukan" << endl;

cout << "\n Apakah Anda ingin Mencari Data Kembali (Y/N) = ";

cin >> pil;

}

while (toupper(pil)=='Y');

return 0;

}

// Fungctional Definition

int binary\_search (int array[],int array\_size, int element) {

int start = 0;

int end = array\_size-1;

int middle;

int position = -1;

middle = (start+end)/2;

do {

if (element < array [middle])

end = middle - 1;

else if (element > array [middle])

start = middle + 1;

middle = (start+end)/2;

}

while (start <= end && array [middle]!= element);

if (array [middle] == element)

position = middle;

return position;

}



