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Tugas Alpro Minggu 7

main.cpp:

#include <iostream>

#include "header.h"

using namespace std;

int main()

{ int arr[]= {3,19,11,4};

int size\_arr = sizeof (arr) / sizeof (arr[0]);

cout << " apakah angka 19 ada di array ? " << LinierSearch(19,size\_arr,arr) << endl;

cout << " apakah angka 19 ada di array ? " << LinierSearchSentinel(19,size\_arr,arr) << endl;

int arr\_urut[]= {3,4,11,19};

int size\_arr\_urut = sizeof (arr\_urut) / sizeof (arr\_urut[0]);

cout << " apakah angka 19 ada di array ? " << BinarySearch(19,size\_arr,arr) << endl;

return 0;

}

header.h:

#ifndef HEADER\_H\_INCLUDED

#define HEADER\_H\_INCLUDED

#include <iostream>

#include <conio.h>

using namespace std;

bool LinierSearch ( int k, int n, int A[])

{

bool found = false;

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

{

//cout << endl << A[i] << " == " << k <<endl;

if (A[i] == k)

{

found=true;

break;

}

}

return found;

}

int LinierSearchSentinel ( int k, int n, int A[])

{

int found = 0;

A[n-1] = k;

int i=0;

while (A[i]!=k)

{

i++;

}

if (i<n-1)

{

found = 1;

}

return found;

}

bool BinarySearch ( int k, int n, int A[])

{

int found = 0;

int batasBawah = 0;

int batasAtas = n-1;

int mid = 0;

while ((batasBawah <= batasAtas) && (!found))

{

mid = ( batasAtas+batasBawah)/2;

if (A[mid] == k)

{

found = 1;

}

else

{

if (A[mid] > k)

{

batasAtas = mid-1;

}

else

{

batasBawah = mid+1;

}

}

}

return found;

}

#endif // HEADER\_H\_INCLUDED

Hasil compile:

A screenshot of a computer

Description automatically generated