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1 Buatlah algoritma mengurutkan data array 2 dimensi, berukuran 3×3 dengan menggunakan algoritma bubble sort.
Petunjuk : konversikan array 2 dimensi menjadi 1 dimensi, urutkan menggunakan buble sort lalu kembalikan menjadi array 2 dimensi lagi.

→ Deklarasi
    a : array [1...10][1...10] of integer
    aray : array [1...10] of integer
    cur, cur2, z, temp : integer
    tukar : integer
    l, i, j, K, z : integer

→ Deskripsi
/* • input */
    write ('masukkan data')
    read (z)
        for i ← 0 to z do
        for j ← 0 to z do
        read (a[i][j])
    endfor
/* Array 2 dimensi sebelum dikonversi */
        for (i ← 0 to z do)
        for j ← 0 to z do
    write (a[i][j])

```
        end for
        end for

/* Array 2 dimensi di konversi menjadi 1 dimensi */
    k ← 0;
    for i ← 0 to z do
        for j ← 0 to z do
            aray [k] ← a[i][j]
            k++
        end for
    end for
        for k ← 0 to z*z do
        write (aray[k])
        end for

/* Setelah dikonversi menjadi array 1 dimensi, di sorting dengan bubble
    sort */
        for k ← 0 to z*z do
        tukar ← k
        for j ← k+1 to z*z do
            if (aray[j] < aray[tukar])
                tukar ← j;
            endif
            end for
        temp ← aray [tukar]
        aray [tukar] ← aray [k]
        aray [k] ← temp
            write (aray[k])
        end for
```
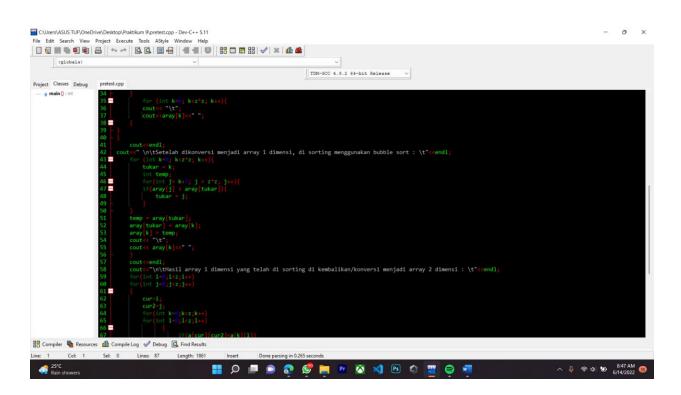
```
*/ Array 1 dimensi yang telah disorting dikonversikan kembali
ke array 2 dimensi */
    for i ← 0 to z do
    for j ← 0 to z do
     cur ← i;
     cur2 ← j;
     for k ← 0 to z do
     for l ← 0 to z do
       if (a[cur][cur2] < a[k][l])
           cur ← k;
           cur2 ← l;
       endif
        temp ← a[i][j]
    a[i][j] ← a[cur][cur2]
    a[cur][cur2] ← temp;
     endfor
   end for
     for i ← 0 to z do
     for j ← 0 to z do
       write (a[i][j]);
     end for
     end for
```
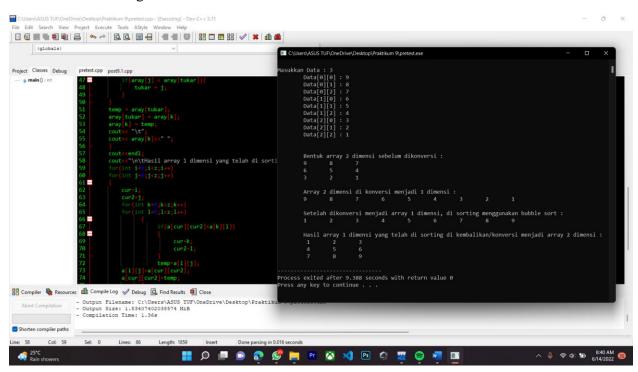
⇨ Source code Pada Dev C++
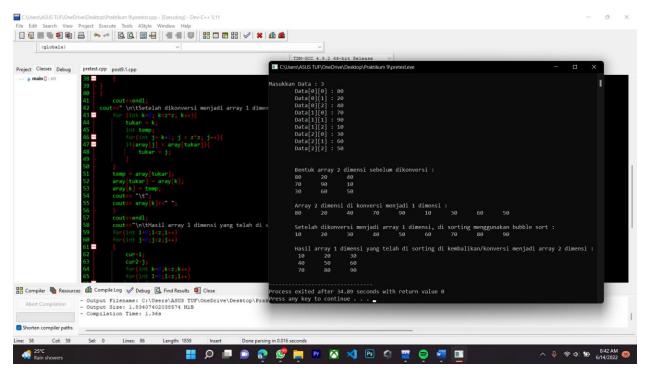
⇨ Hasil running Pecobaan ke-1

⇨ Hasil running percobaan ke-2

Source Code

```cpp
#include <iostream>
#include <conio.h>
using namespace std;

int main(){
int a[10][10];
int aray[10];
int cur,cur2,z,temp;
int tukar;
        cout<<"\t\nMasukkan Data : ";
        cin>>z;

        for(int i=0;i<z;i++)
        for(int j=0;j<z;j++){
                cout<<"\tData["<<i<<"]["<<j<<"] : ";
                cin>>a[i][j];
        }
        cout<<endl;
        cout<<"\n\tBentuk array 2 dimensi sebelum dikonversi : \t"<<endl;
        for (int i=0; i<z; i++){
                for (int j=0; j<z; j++ ){
                        cout<< "\t";
```

```cpp
                cout<< a[i][j]<<" ";
            }
            cout<< endl;
    }
            cout<<" \n\tArray 2 dimensi di konversi menjadi 1 dimensi : \t"<<endl;
    int k=0;
    for (int i=0; i<z; i++){
            for (int j=0; j<z; j++){
            aray[k]=a[i][j];
            k++;
            }
    }
            for (int k=0; k<z*z; k++){
            cout<< "\t";
    cout<<aray[k]<<" ";
            {
}
}
    cout<<endl;
cout<<" \n\tSetelah dikonversi menjadi array 1 dimensi, di sorting menggunakan bubble sort :
\t"<<endl;
    for (int k=0; k<z*z; k++){
            tukar = k;
            int temp;
            for(int j= k+1; j < z*z; j++){
            if(aray[j] < aray[tukar]){
                    tukar = j;
            }
    }
    temp = aray[tukar];
    aray[tukar] = aray[k];
    aray[k] = temp;
    cout<< "\t";
    cout<< aray[k]<<" ";
    }
    cout<<endl;
    cout<<"\n\tHasil array 1 dimensi yang telah di sorting di kembalikan/konversi menjadi
array 2 dimensi : \t"<<endl;
    for(int i=0;i<z;i++)
   for(int j=0;j<z;j++)
   {
     cur=i;
     cur2=j;
     for(int k=0;k<z;k++)
     for(int l=0;l<z;l++)
         {
```

```cpp
            if(a[cur][cur2]<a[k][l])
            {
                cur=k;
                cur2=l;
            }
            temp=a[i][j];
    a[i][j]=a[cur][cur2];
    a[cur][cur2]=temp;
        }
   }
  for(int i=0;i<z;i++)
  {
  for(int j=0;j<z;j++)
  {
    cout<<"\t";
    cout<<" "<<a[i][j];
  }
  cout<<endl;
}
};
```