**LAPORAN PRAKTIKUM 1**

**Analisis algoritma**



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Ss code

#include<iostream>

#include<string.h>

#include<stdio.h>

using **namespace** std;

#define n 5

**bool** chooseMan(**int** prefer[2 \* n][n],**int** w,**int** m,**int** m1){

    for(**int** i=0;i<n;i++){

        if(prefer[w][i]== m1){

            return true;

        }

        if(prefer[w][i]==m){

            return false;

        }

    }

}

**void** stableMatching (**int** prefer[2\*n] [n]){

**int** wPartner[n];

**bool** mFree[n];

    memset(wPartner, -1, sizeof(wPartner));

    memset(mFree, false, sizeof(mFree));

**int** freeCount = n;

    while (freeCount > 0)

    {

**int** m;

        for (m = 0; m < n; m++)

            if (mFree[m] == false)

                break;

        for (**int** i = 0; i < n && mFree[m] == false; i++)

        {

**int** w = prefer[m][i];

            if (wPartner[w-n] == -1)

            {

                wPartner[w-n] = m;

                mFree[m] = true;

                freeCount--;

            }

             else

            {

**int** m1 = wPartner[w-n];

                if (chooseMan(prefer, w, m, m1) == false)

                {

                    wPartner[w-n] = m;

                    mFree[m] = true;

                    mFree[m1] = false;

                }

            }*// End of Else*

        }

    }

     cout << "Pria Wanita" << endl;

     string pria;

     string wanita;

    for (**int** i = 0; i < n; i++) {

        if(i<n){

            if(wPartner[i]==0){

                pria="victor";

            }

            if(wPartner[i]==1){

                pria="Wyatt";

            }

            if(wPartner[i]==2){

                pria="Xavier";

            }

            if(wPartner[i]==3){

                pria="Yancey";

            }

            if(wPartner[i]==4){

                pria="Zeus";

            }

            if(i==0){

                wanita="Amy";

            }

            if(i==1){

                wanita="Bertha";

            }

            if(i==2){

                wanita="Clare";

            }

            if(i==3){

                wanita="Diane";

            }

            if(i==4){

                wanita="Erika";

            }

            cout<<" "<< pria << "\t"<<wanita<<endl;

        }

    }

}

**int** main()

{

**int** prefer[2\*n][n] = { {6, 5, 8, 9,7},

        {8, 6, 5, 7,9},

        {6, 9, 8, 7,5},

        {5, 8, 7, 6,9},

        {6, 8, 5, 9,7},

        {4, 0, 1, 3,2},

        {2, 1, 3, 0,4},

        {1, 2, 3, 4,0},

        {0,4,3,2,1},

        {3,1,4,2,0}

    };

    stableMatching(prefer);

    return 0;

}