

Tugas Algoritma Gale-Shapley

Analisis Algoritma



Disusun Oleh :

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Kelas B

**PROGRAM STUDI TEKNIK INFORMATIKA
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM
UNIVERSITAS PADJADJARAN
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Men's Preferences Profile

	0 th	1 st	2 nd	3 rd	4 th
Victor	Bertha	Amy	Diane	Erika	Clare
Wyatt	Diane	Bertha	Amy	Clare	Erika
Xavier	Bertha	Erika	Clare	Diane	Amy
Yancey	Amy	Diane	Clare	Bertha	Erika
Zeus	Bertha	Diane	Amy	Erika	Clare

Women's Preferences Profile

	0 th	1 st	2 nd	3 rd	4 th
Amy	Zeus	Victor	Wyatt	Yancey	Xavier
Bertha	Xavier	Wyatt	Yancey	Victor	Zeus
Clare	Wyatt	Xavier	Yancey	Zeus	Victor
Diane	Victor	Zeus	Yancey	Xavier	Wyatt
Erika	Yancey	Wyatt	Zeus	Xavier	Victor

1. Victor → Bertha
2. Wyatt → Diane
3. Xavier → Bertha
4. Yancey → Amy
5. Zeus → Bertha
6. Victor → Amy
7. Wyatt → Bertha
8. Yancey → Diane
9. Zeus → Diane
10. Wyatt → Amy
11. Yancey → Clare
12. Wyatt → Clare
13. Yancey → Bertha
14. Yancey → Erika

Victor	Bertha	Victor	Bertha	Victor	Bertha	Victor	-	Victor	-
Wyatt		Wyatt	Diane	Wyatt	Diane	Wyatt	Diane	Wyatt	Diane
Xavier		Xavier		Xavier	Bertha	Xavier	Bertha	Xavier	Bertha
Yancey		Yancey		Yancey		Yancey	Amy	Yancey	Amy
Zeus		Zeus		Zeus		Zeus		Zeus	Bertha

Victor	Amy	Victor	Amy	Victor	Amy	Victor	Amy	Victor	Amy
Wyatt	Diane	Wyatt	Bertha	Wyatt	-	Wyatt	-	Wyatt	Amy
Xavier	Bertha	Xavier	Bertha	Xavier	Bertha	Xavier	Bertha	Xavier	Bertha
Yancey	Amy	Yancey	-	Yancey	Diane	Yancey	Diane	Yancey	-
Zeus	-	Zeus	-	Zeus	-	Zeus	Diane	Zeus	Diane

Victor	Amy	Victor	Amy	Victor	Amy	Victor	Amy
Wyatt	-	Wyatt	Claire	Wyatt	Claire	Wyatt	Claire
Xavier	Bertha	Xavier	Bertha	Xavier	Bertha	Xavier	Bertha
Yancey	Claire	Yancey	Claire	Yancey	Bertha	Yancey	Erika
Zeus	Diane	Zeus	Diane	Zeus	Diane	Zeus	Diane

Codingan

```
#include <iostream>

#include <string.h>

#include <stdio.h>

using namespace std;

#define N 5

bool pPilihL1dariL(int pilih[2*N][N], int p, int l, int l1) {
    for (int i = 0; i < N; i++) {
        if (pilih[p][i] == l1) return true;
        if (pilih[p][i] == l) return false; }
    }

void stabil(int pilih[2*N][N]) {
    int pPasangan[N];
    bool lKosong[N];
    memset(pPasangan, -1, sizeof(pPasangan));
    memset(lKosong, false, sizeof(lKosong));
    int freecount = N;

    while (freecount > 0) {
        int l;
        for (l = 0; l < N; l++) if (lKosong[l] == false) break;
```

```

for (int i = 0; i < N && IKosong[l] == false; i++) {
    int p = pilih[l][i];
    if (pPasangan[p-N] == -1) { pPasangan[p-N] = l;
        IKosong[l] = true;
        freecount--; }
else { int l1 = pPasangan[p-N];
    if (pPilihL1dariL(pilih, p, l, l1) == false) {
        pPasangan[p-N] = l;
        IKosong[l] = true;
        IKosong[l1] = false; } } }

```

```

cout << "Cewe Cowo" << endl; string namco;

```

```

string namce;

```

```

for (int i = 0; i < N; i++) {
    if(i<N){ if(pPasangan[i]==0) namco="Victor";
    if(pPasangan[i]==1) namco="Wyatt";
    if(pPasangan[i]==2) namco="Xavier";
    if(pPasangan[i]==3) namco="Yancey";
    if(pPasangan[i]==4) namco="Zeus";
    if(i==0) namce="Amy";
    if(i==1) namce="Bertha";
    if(i==2) namce="Clare";
    if(i==3) namce="Diane";
    if(i==4) namce="Erika"; }

```

```

cout << " " << namce << "\t" << namco << endl; } }

```

```

int main() {

```

```

int pilih[2*N][N] = {

```

```

    {6,5,8,9,7},

```

```

    {8,6,5,7,9},

```

```

    {6,9,7,8,5},

```

```
{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}  
}; stabil(pilih);
```

```
return 0; }
```