

TUGAS PERTEMUAN 3
PRAKTIKUM ALGORITMA & STRUKTUR DATA



DISUSUN OLEH:
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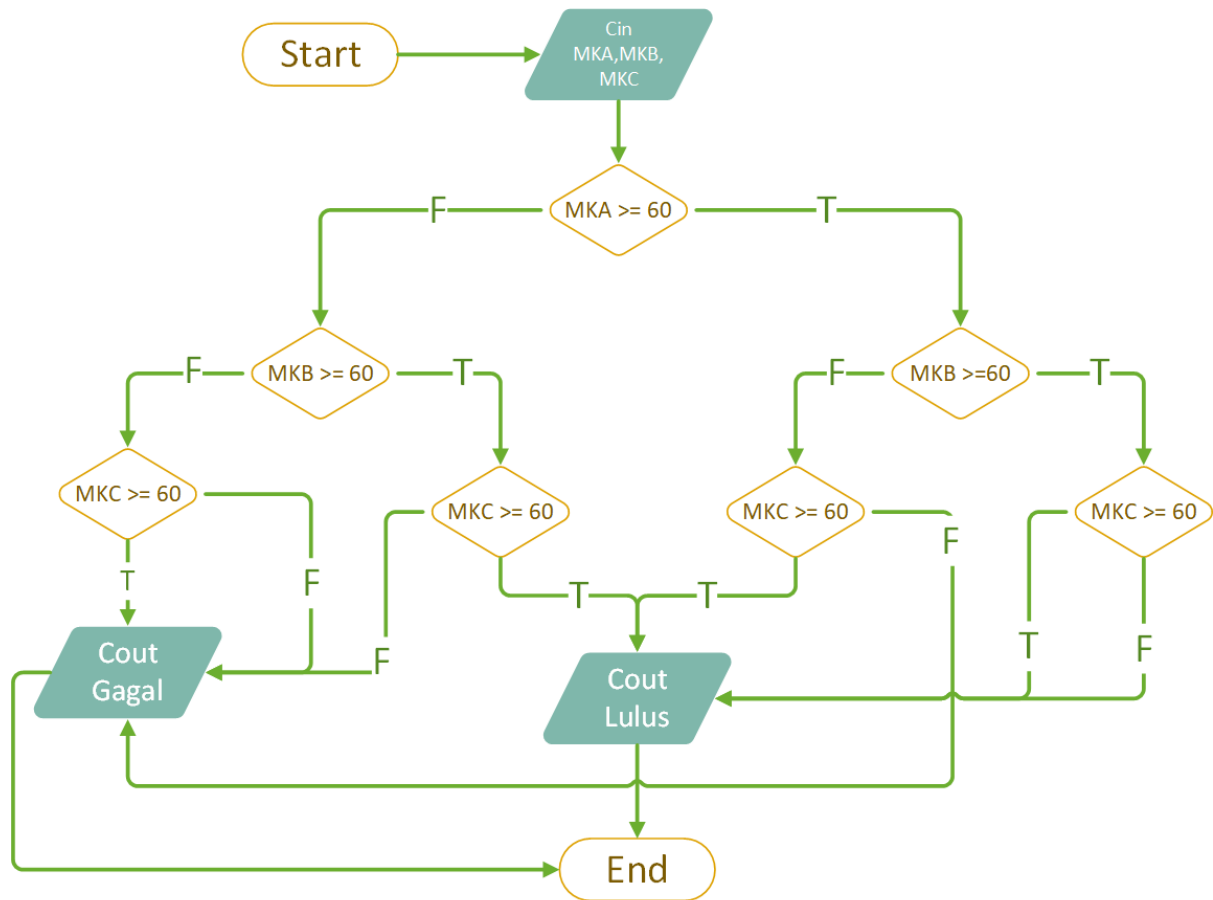
Source code program sebelum disederhanakan

```
1  #include <iostream>
2  using namespace std;
3
4  int MKA,MKB,MKC;
5  int main (){
6      cout << "Input Mata Kuliah A : "; cin >> MKA;
7      cout << "Input Mata Kuliah B : "; cin >> MKB;
8      cout << "Input Mata Kuliah C : "; cin >> MKC;
9
10     if(MKA >= 60){
11         if(MKB >= 60){
12             if(MKC >= 60){
13                 cout << "Anda Lulus" << endl;
14             }else {
15                 cout << "Anda Lulus" << endl;
16             }
17         }else if(MKC >= 60){
18             cout << "Anda Lulus" << endl;
19         }else {
20             cout << "Anda Gagal" << endl;
21         }
22     }else if(MKB >= 60){
23         if (MKC >= 60){
24             cout << "Anda Lulus" << endl;
25         } else {
26             cout << "Anda Gagal" << endl;
27         }
28     }else if(MKC >= 60){
29         cout << "Anda Gagal" << endl;
30     }else {
31         cout << "Anda Gagal" << endl;
32     }
33
34     getchar();
35     cin.get();
36     return 0;
37 }
```

Source code program setelah disederhanakan

```
1  #include <iostream>
2  using namespace std;
3
4  int MKA,MKB,MKC;
5  int main (){
6      cout << "Input Mata Kuliah A : "; cin >> MKA;
7      cout << "Input Mata Kuliah B : "; cin >> MKB;
8      cout << "Input Mata Kuliah C : "; cin >> MKC;
9
10     if (MKA >= 60 && MKB >=60 && MKC >= 60){
11         cout << "Anda Lulus" << endl;
12     }else if (MKA >= 60 && MKB >= 60){
13         cout << "Anda Lulus" << endl;
14     }else if (MKA >= 60 && MKC >= 60){
15         cout << "Anda Lulus" << endl;
16     }else if (MKB >= 60 && MKC >= 60){
17         cout << "Anda Lulus" << endl;
18     }else {
19         cout << "Anda Gagal" << endl;
20     }
21     getchar();
22     cin.get();
23     return 0;
24 }
```

Flowchart sebelum disederhanakan



Flowchart setelah disederhanakan

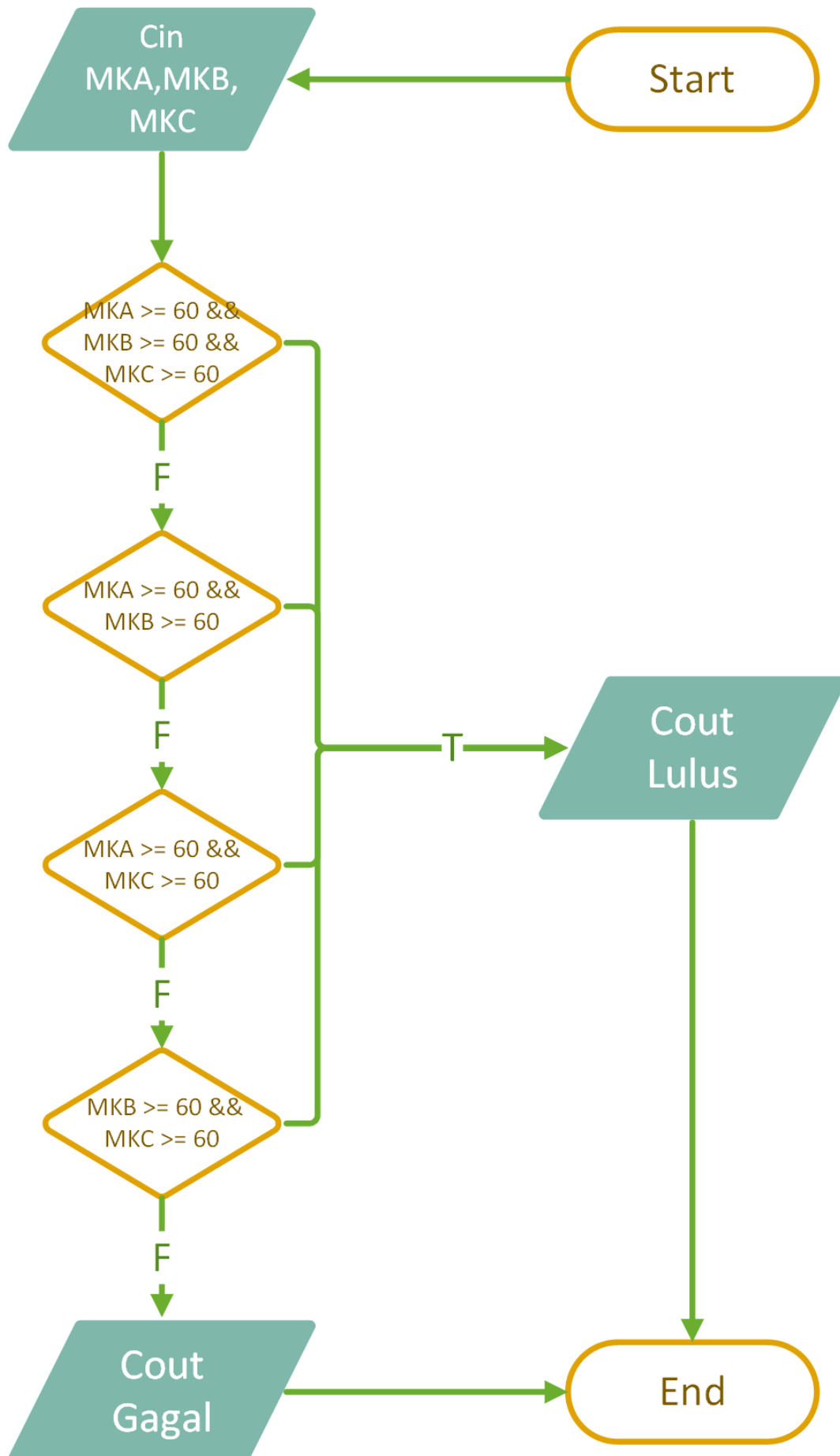


Table kebenaran

Input	Column1	Column2	Output		
MKA	MKB	MKC	L/G		L --> Lulus
0	0	0	G		G--> Gagal
1	0	0	G		0 --> Nilai < 60
0	1	0	G		1 --> Nilai >=60
0	0	1	G		
1	1	0	L		
1	0	1	L		
0	1	1	L		
1	1	1	L		

Simulasi sebelum disederhanakan

SIMULASI MENENTUKAN MAHASISWA LULUS/GAGAL SEBELUM DISEDERHANAKAN					
Identifikasi Variabel	Isi Variabel	MKA	MKB	MKC	TRUE/FALSE
int MKA,MKB,MKC					
Input					
MKA	Ex. MKA = 30	30			
MKB	Ex. MKB = 30	30	30		
MKC	Ex. MKC = 30	30	30	30	
Proses					
MKA >= 60		30	30	30	FALSE
MKB >= 60		30	30	30	FALSE
MKC >= 60		30	30	30	FALSE
Output					
cout "Anda Gagal"					

Simulasi setelah disederhanakan

SIMULASI MENENTUKAN MAHASISWA LULUS/GAGAL SETELAH DISEDERHANAKAN					
Identifikasi Variabel	Isi Variabel	MKA	MKB	MKC	TRUE/FALSE
int MKA,MKB,MKC					
Input					
MKA	Ex. MKA = 30	30			
MKB	Ex. MKB = 70	30	70		
MKC	Ex. MKC = 70	30	70	70	
Proses					
MKA >= 60 && MKB >= 60 && MKC >= 60		30	70	70	FALSE
MKA >= 60 && MKB >= 60		30	70	70	FALSE
MKA >= 60 && MKC >= 60		30	70	70	FALSE
MKB >= 60 && MKC >= 60		30	70	70	TRUE
Output					
cout "Anda Lulus"					

Hasil program sebelum disederhanakan

```

Input Nilai Mata Kuliah A : 40
Input Nilai Mata Kuliah B : 70
Input Nilai Mata Kuliah C : 80
Anda Lulus

-----
Process exited after 10.84 seconds with return value 0
Press any key to continue . . .

```

Hasil program setelah disederhanakan

```

Input Nilai Mata Kuliah A : 70
Input Nilai Mata Kuliah B : 50
Input Nilai Mata Kuliah C : 50
Anda Gagal

-----
Process exited after 7.214 seconds with return value 0
Press any key to continue . . .

```