

10/04/2025

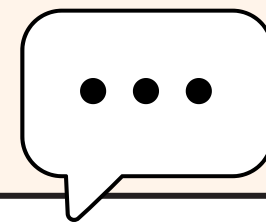


PERCABANGAN

DASAR BAHASA C

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SMK Negeri 12 Malang



MACAM PERCABANGAN

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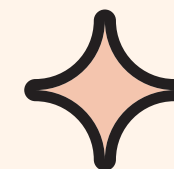
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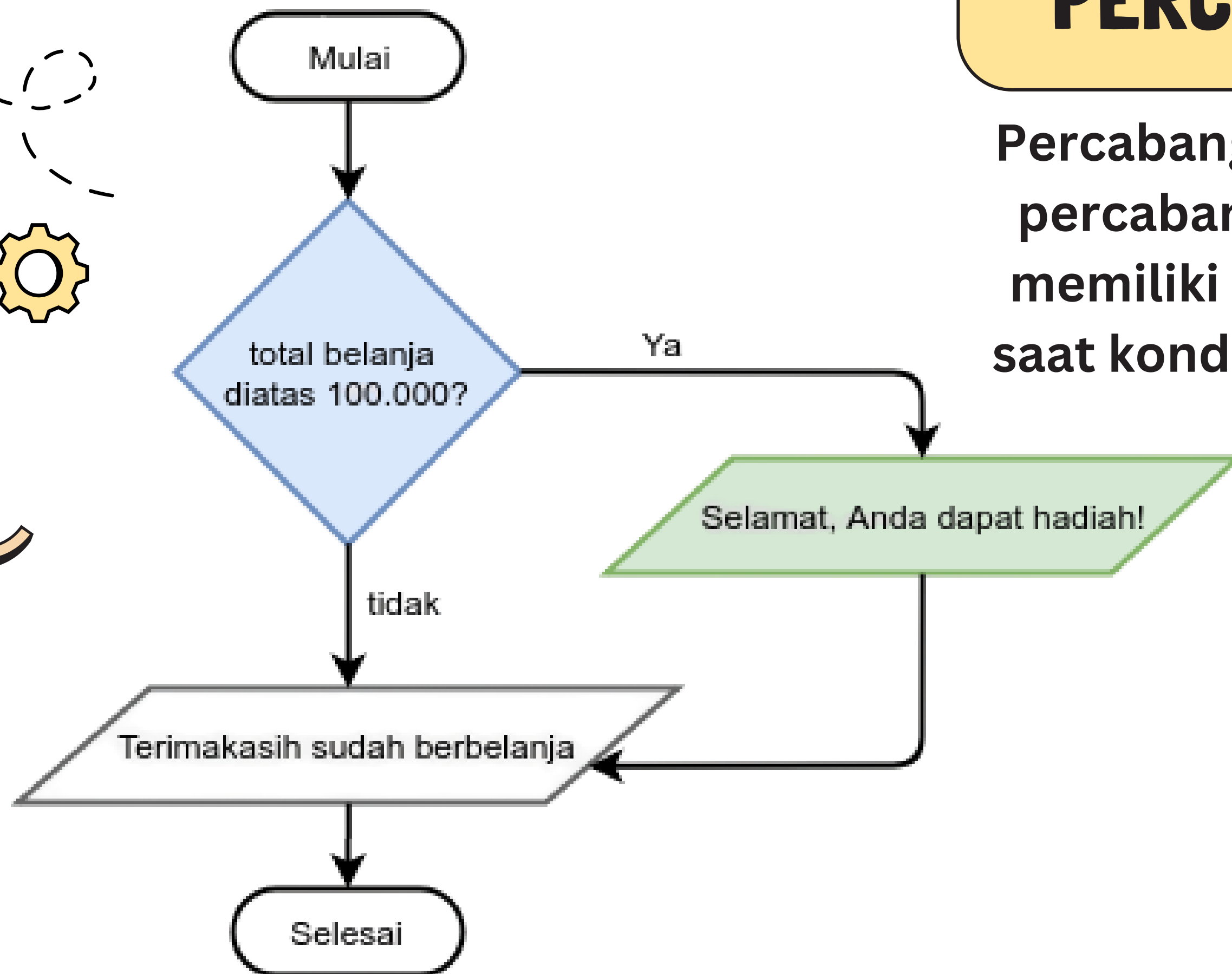
Nested If





PERCABANGAN IF

Percabangan if merupakan percabangan yang hanya memiliki satu blok pilihan saat kondisi bernilai benar.

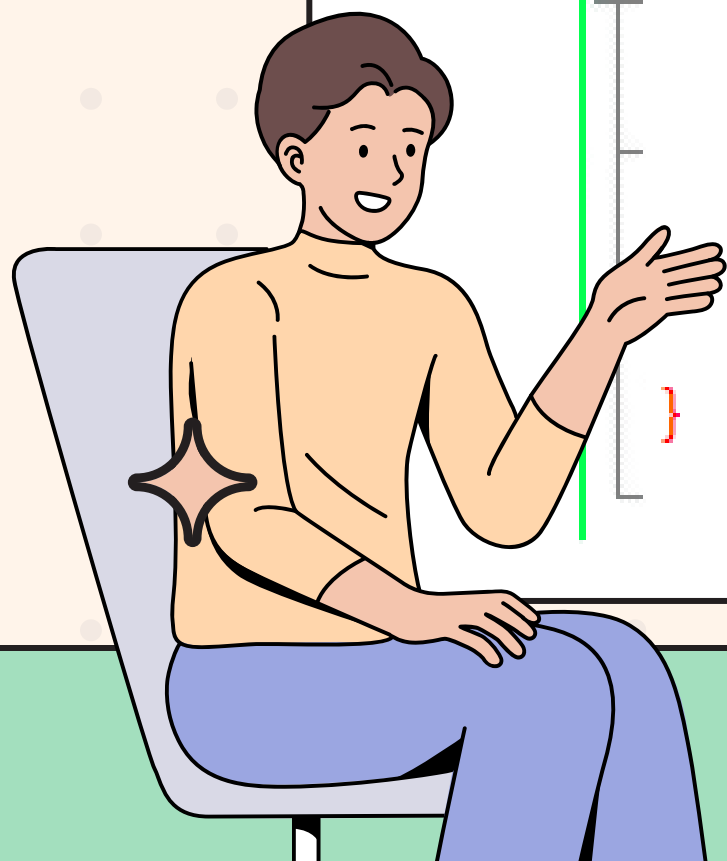




IMPLEMENTASI

```
#include <stdio.h>
```

```
void main() {  
    printf("== Program Pembayaran ==\n");  
    int total_belanja = 0;  
  
    printf("Inputkan total belanja: ");  
    scanf("%i" &total_belanja);  
  
    // menggunakan blok percabangan if  
    if( total_belanja > 100000 ){  
        printf("Selamat, Anda mendapatkan hadiah!\n");  
    }  
  
    printf("Terima kasih sudah berbelanja di toko kami\n\n");  
}
```





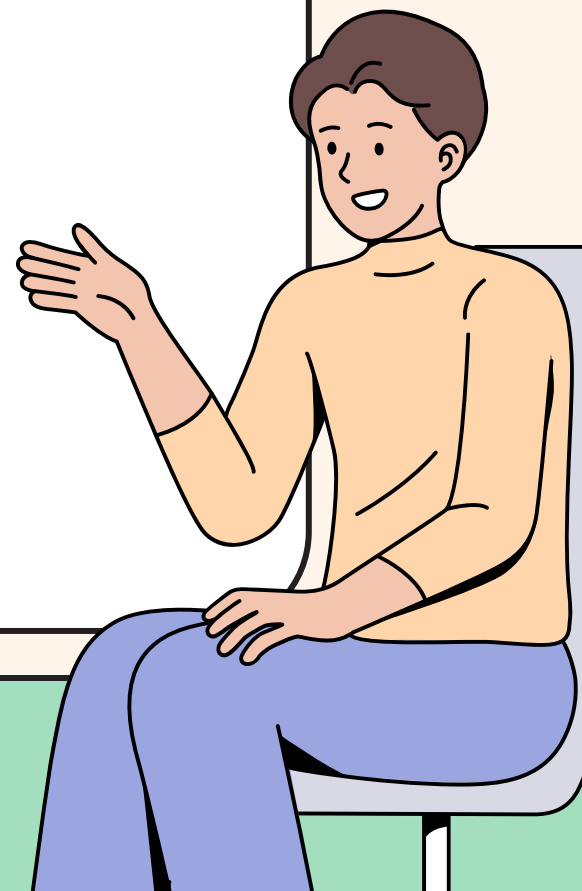
HASIL

```
== Program Pembayaran ==  
Inputkan total belanja: 99999  
Terima kasih sudah berbelanja di toko kami
```

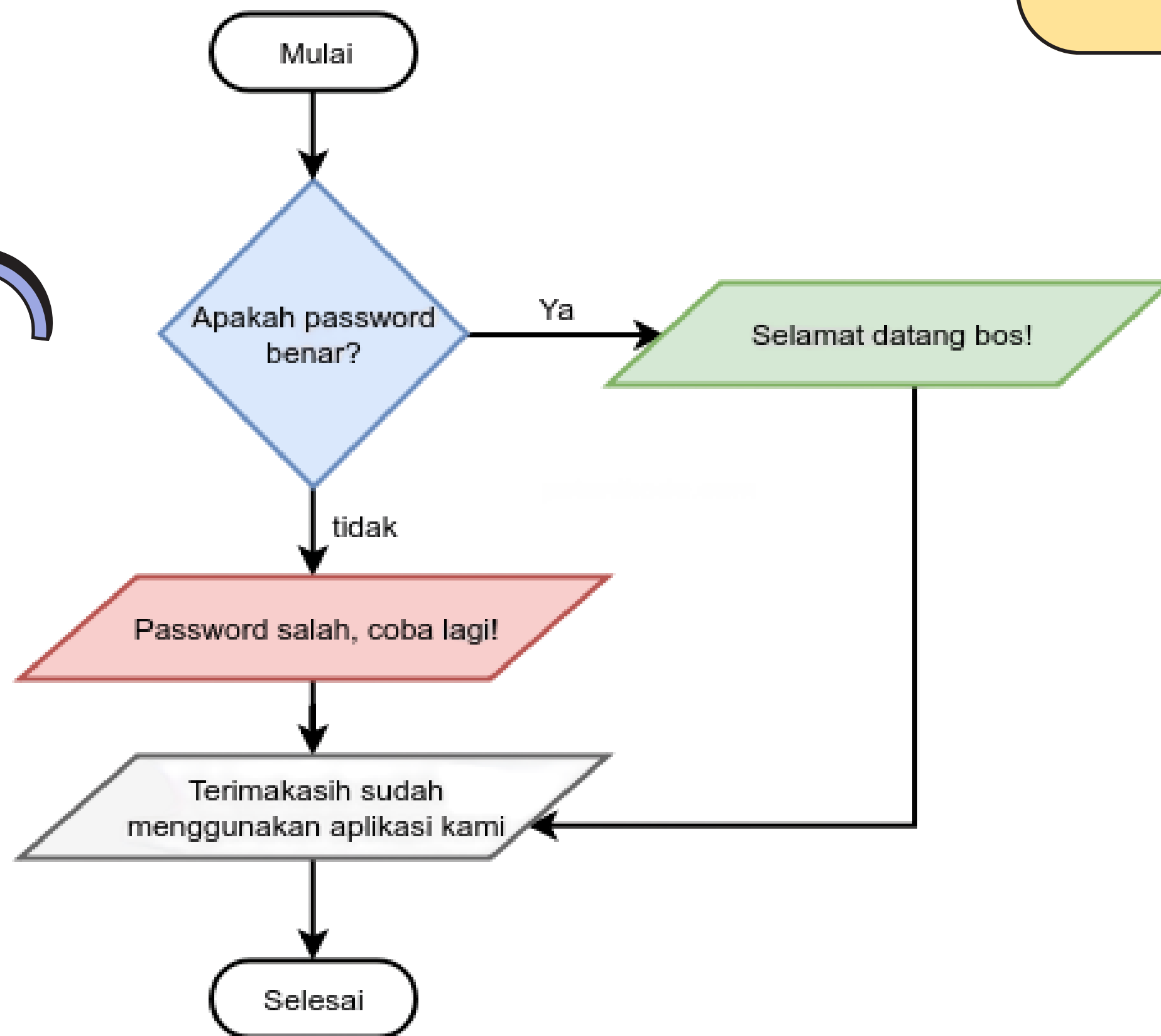
```
Process returned 0 (0x0)   execution time : 7.460 s  
Press any key to continue.
```

```
== Program Pembayaran ==  
Inputkan total belanja: 100001  
Selamat, Anda mendapatkan hadiah!  
Terima kasih sudah berbelanja di toko kami
```

```
Process returned 0 (0x0)   execution time : 6.362 s  
Press any key to continue.
```



PERCABANGAN IF/ELSE



Percabangan if/else merupakan percabangan yang memiliki dua blok pilihan.

Blok pilihan pertama untuk kondisi benar, dan pilihan kedua untuk kondisi salah (else).



IMPLEMENTASI

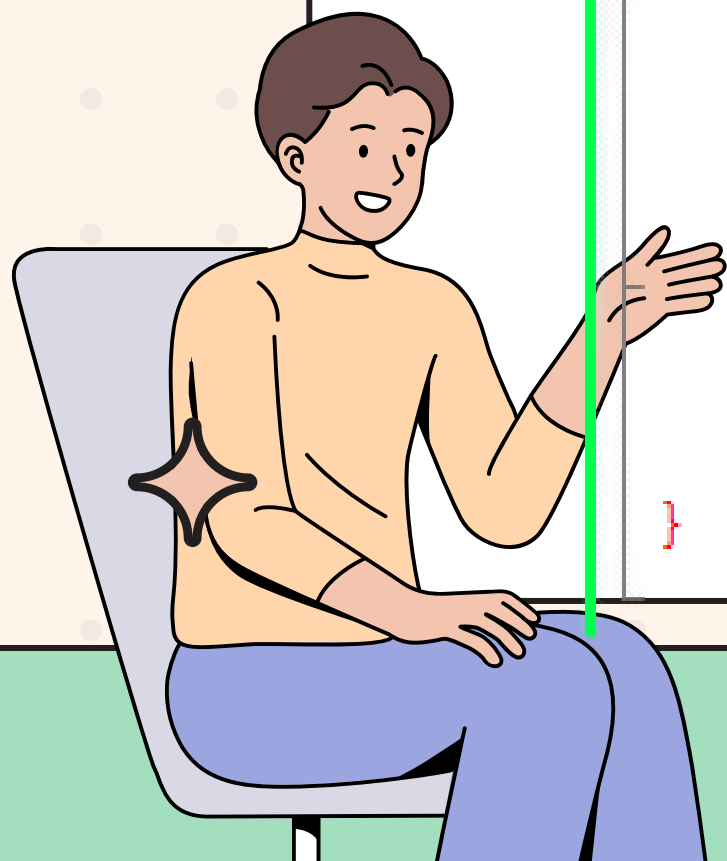
```
#include <stdio.h>

void main() {
    // membuat array karakter untuk menyimpan password
    char password[30];

    printf("==== Program Log In ====\\n");
    printf("Masukan password: ");
    scanf("%s", &password);

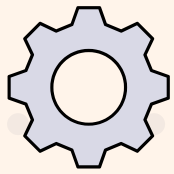
    // percabangan if/else
    if( strcmp(password, "pass") == 0 ){
        printf("Selamat datang bos!\\n");
    } else {
        printf("Password salah, coba lagi!\\n");
    }

    printf("Terima kasih sudah menggunakan aplikasi Log In!\\n");
}
```





HASIL



```
==== Program Log In ====
```

```
Masukan password: pass
```

```
Selamat datang bos!
```

```
Terima kasih sudah menggunakan aplikasi Log In!
```

```
Process returned 0 (0x0)    execution time : 3.382 s
```

```
Press any key to continue.
```

```
==== Program Log In ====
```

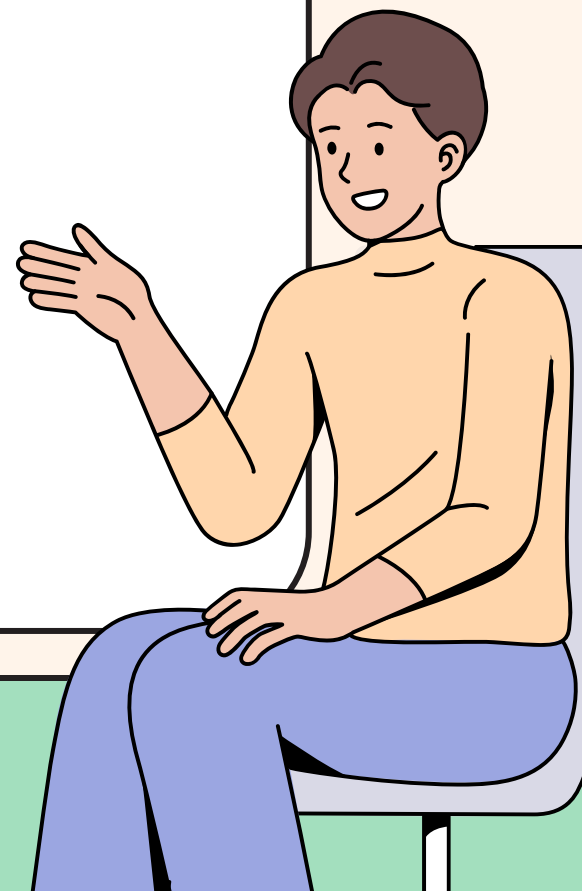
```
Masukan password: ass
```

```
Password salah, coba lagi!
```

```
Terima kasih sudah menggunakan aplikasi Log In!
```

```
Process returned 0 (0x0)    execution time : 3.580 s
```

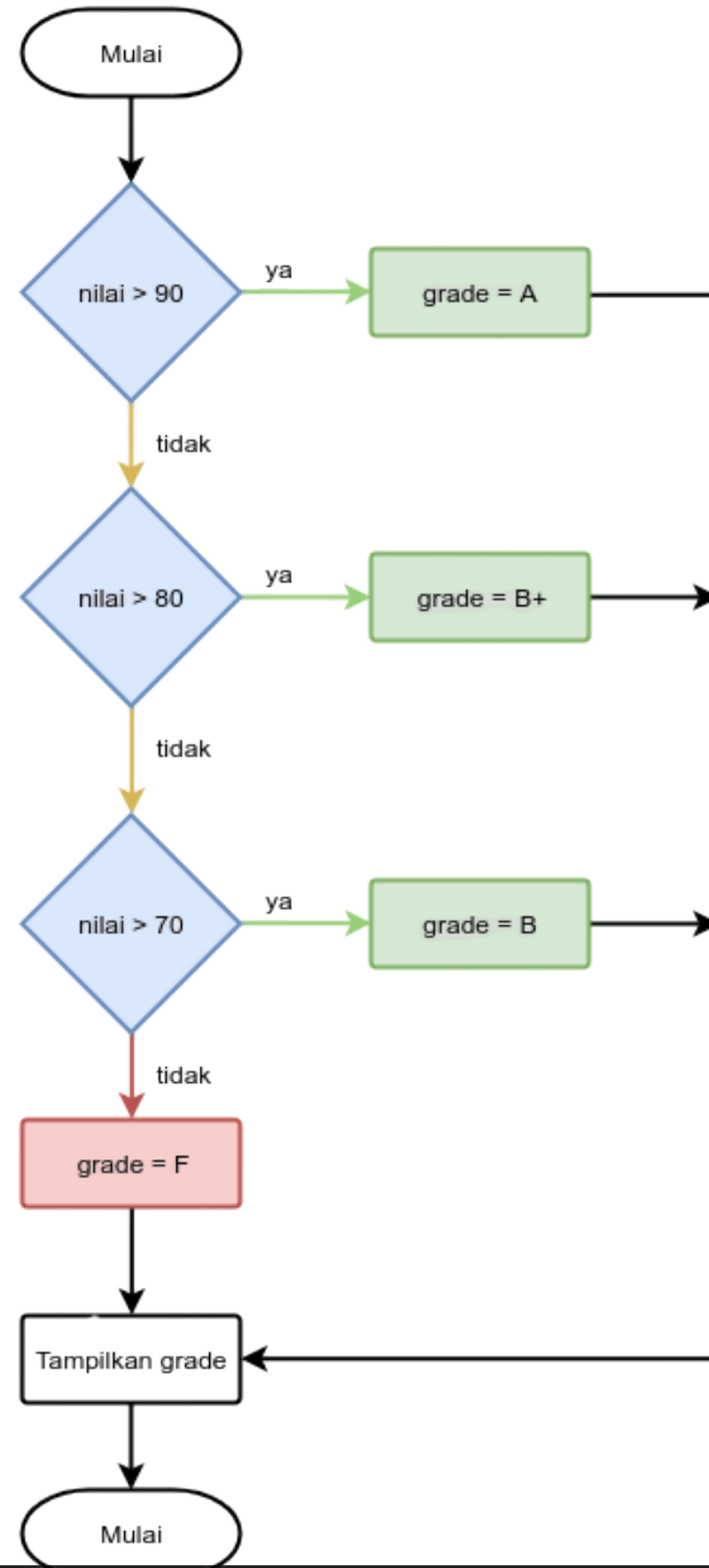
```
Press any key to continue.
```





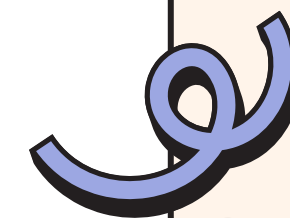
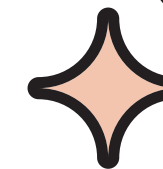
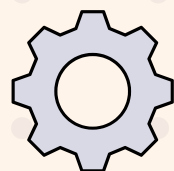
IF/ELSE/IF

Percabangan if/else/if merupakan percabangan yang memiliki lebih dari dua blok pilihan.





IMPLEMENTASI



```
#include <stdio.h>
```

```
void main() {
```

```
    int nilai;
```

```
    char grade;
```

```
    printf("=== Program Grade Nilai ===\n");
```

```
    printf("Inputkan nilai: ");
```

```
    scanf("%i", &nilai);
```

```
    // menggunakan percabangan if/else/if
```

```
    if (nilai >= 90) {
```

```
        grade = 'A';
```

```
    } else if (nilai >= 80) {
```

```
        grade = 'B';
```

```
    } else if (nilai >= 70) {
```

```
        grade = 'B';
```

```
    } else if (nilai >= 60) {
```

```
        grade = 'C';
```

```
    } else if (nilai >= 50) {
```

```
        grade = 'C';
```

```
    } else if (nilai >= 40) {
```

```
        grade = 'D';
```

```
    } else if (nilai >= 30) {
```

```
        grade = 'E';
```

```
    } else {
```

```
        grade = 'F';
```

```
    }
```

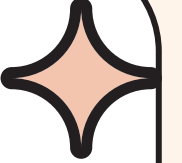
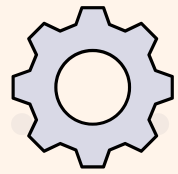
```
    printf("Nilai: %i\n", nilai);
```

```
    printf("Grade anda: %c\n", grade);
```

```
}
```



HASIL

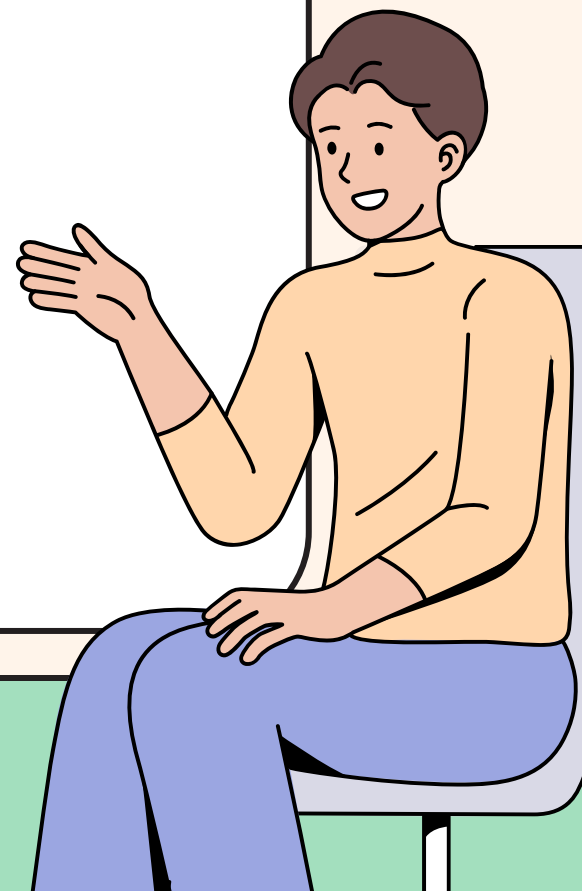
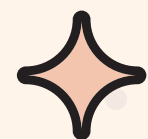


```
=== Program Grade Nilai ===  
Inputkan nilai: 80  
Nilai: 80  
Grade anda: B
```

```
Process returned 14 (0xE)    execution time : 1.628 s  
Press any key to continue.
```

```
=== Program Grade Nilai ===  
Inputkan nilai: 29  
Nilai: 29  
Grade anda: F
```

```
Process returned 14 (0xE)    execution time : 1.890 s  
Press any key to continue.
```





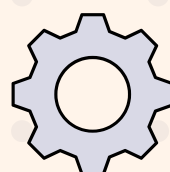
SWITCH CASE

```
switch(variabel){  
    case <value>:  
        // blok kode  
        break;  
    case <value>:  
        // blok kode  
        break;  
    default:  
        // blok kode  
}
```

- Percabangan switch/case adalah bentuk lain dari percabangan if/else/if.
- Kita dapat membuat blok kode (case) sebanyak yang diinginkan di dalam blok switch.
- Pada <value>, kita bisa isi dengan nilai yang nanti akan dibandingkan dengan variabel.



IMPLEMENTASI



```
#include <stdio.h>
```

```
void main() {  
    char grade;  
    printf("Inputkan grade: ");  
    scanf("%c", &grade);  
    switch (toupper(grade)) {  
        case 'A':  
            printf("Luar biasa!\n");  
            break;  
        case 'B':  
            break;  
        case 'C':  
            printf("Bagus!\n");  
            break;  
        case 'D':  
            printf("Anda lulus\n");  
            break;  
        case 'E':  
        case 'F':  
            printf("Anda remidi\n");  
            break;  
        default:  
            printf("Grade Salah!\n");  
    }  
}
```



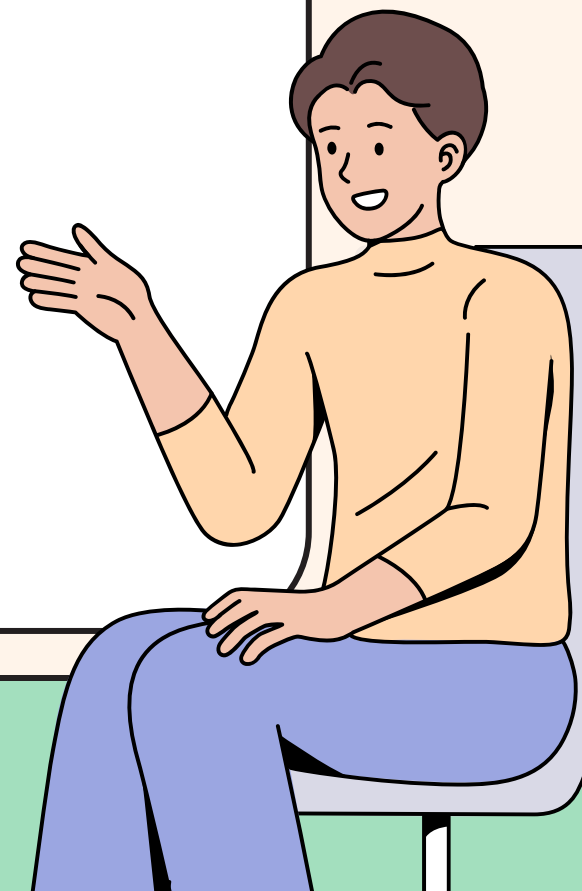
HASIL

Inputkan grade: b

Process returned 4199930 (0x4015FA) execution time : 3.058 s
Press any key to continue.

Inputkan grade: E
Anda remidi

Process returned 0 (0x0) execution time : 2.398 s
Press any key to continue.





OPERATOR TERNARY

- Percabangan menggunakan operator ternary merupakan bentuk lain dari percabangan if/else.
- Operator ternary juga dikenal dengan sebutan operator kondisi (conditional operator).
- Bagian kondisi dapat kita isi dengan ekspresi yang menghasilkan nilai true dan false.

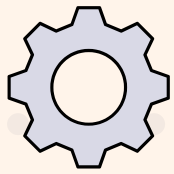
```
(kondisi) ? true : false
```



IMPLEMENTASI



```
#include <stdio.h>
```



```
void main() {
```

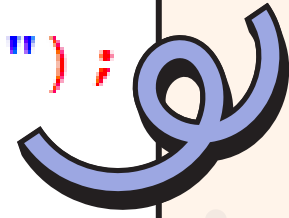
```
    int jawaban;
```

```
    printf("Berapakah hasil 3+4?\n");
```

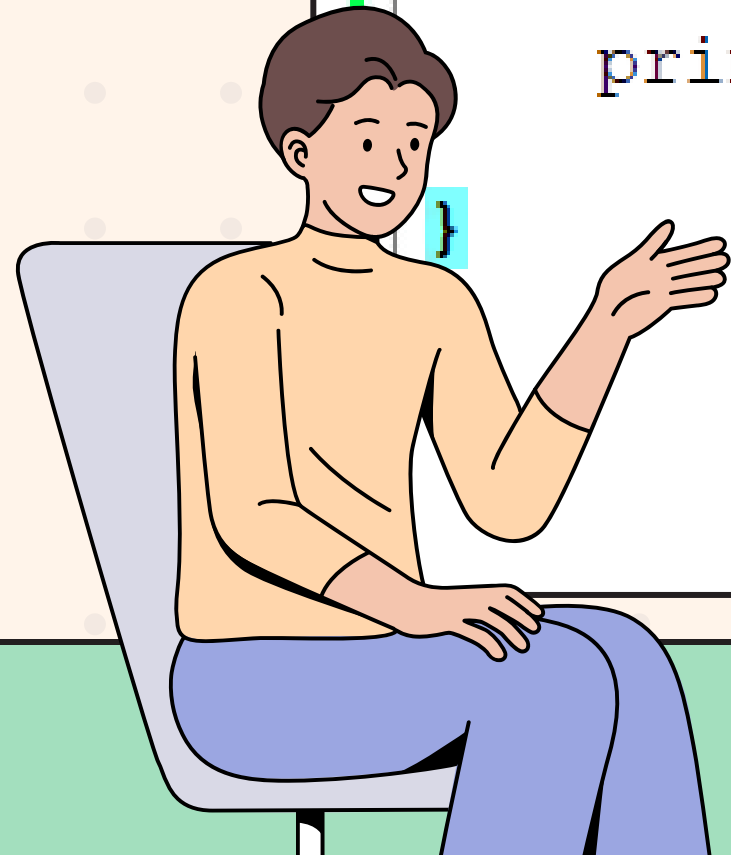
```
    printf("jawab> ");
```

```
    scanf("%d", &jawaban);
```

```
    printf("Jawaban anda: %s\n", (jawaban == 7) ? "Benar" : "Salah");
```

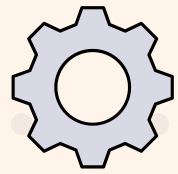


```
}
```





HASIL



Berapakah hasil 3+4?

jawab> 7

Jawaban anda: Benar

Process returned 20 (0x14)

execution time : 2.119 s

Press any key to continue.

Berapakah hasil 3+4?

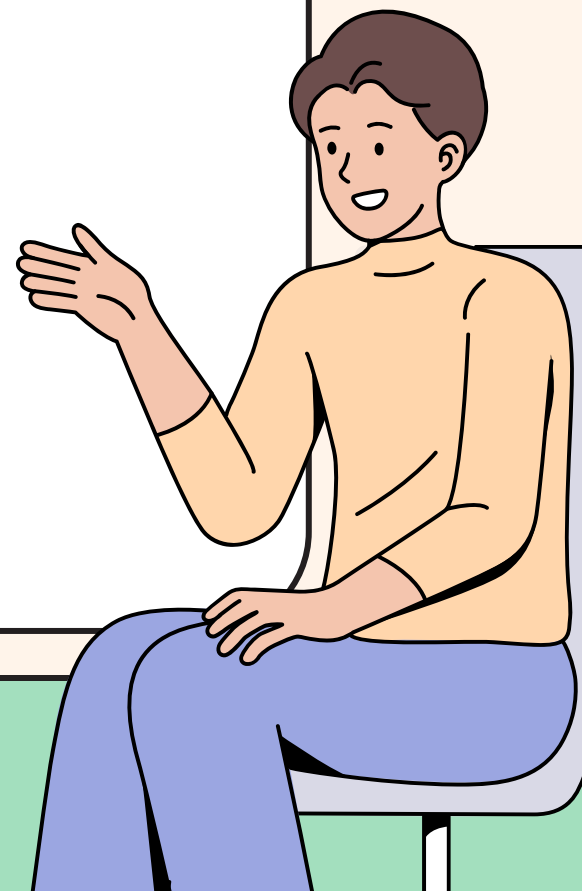
jawab> 8

Jawaban anda: Salah

Process returned 20 (0x14)

execution time : 2.738 s

Press any key to continue.





NESTED IF

```
if(kondisi)
{
    //blok kode
    if(kondisi)
    {
        //blok kode
    }
    else
    {
        // blok kode
    }
}
else
{
    // blok kode
}
```

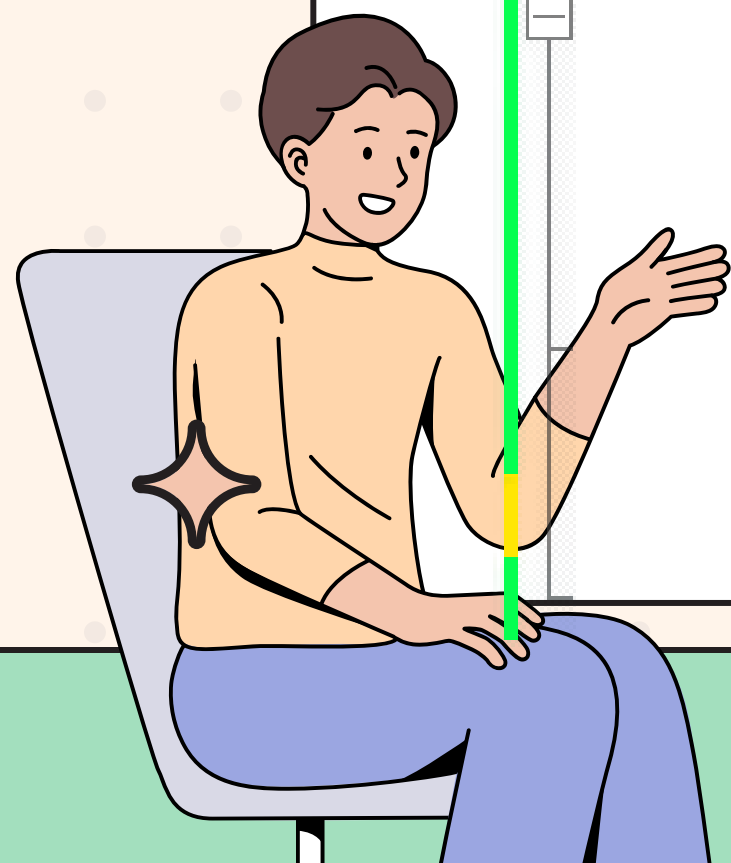
Percabangan Bersarang (Nested) merupakan gabungan antara dua atau lebih percabangan yang telah dipelajari sebelumnya. atau bisa disebut percabangan bertingkat



IMPLEMENTASI

```
#include <stdio.h>
```

```
void main() {  
    char username[30], password[30];  
  
    printf("=== Welcome to Awesome Program ===\n");  
    printf("Username: ");  
    scanf("%s", &username);  
    printf("Password: ");  
    scanf("%s", &password);  
  
    if(strcmp(username, "abror") == 0) {  
        if(strcmp(password, "pass") == 0) {  
            printf("Selamat datang bos!\n");  
        } else {  
            printf("Password salah, coba lagi!\n");  
        }  
    } else {  
        printf("Anda belum terdaftar\n");  
    }  
}
```





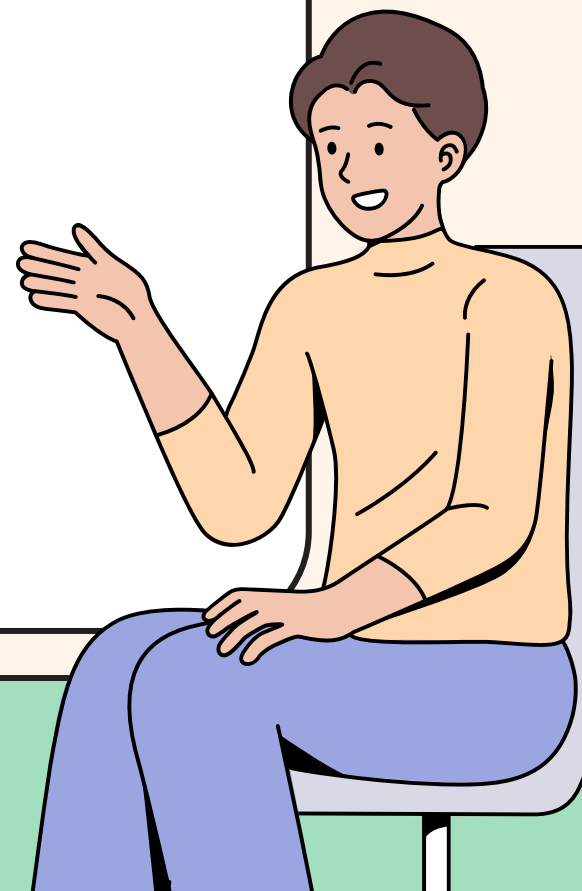
HASIL

```
=== Welcome to Awesome Program ===  
Username: abror  
Password: pass  
Selamat datang bos!
```

```
Process returned 0 (0x0)   execution time : 5.384 s  
Press any key to continue.  
|
```

```
=== Welcome to Awesome Program ===  
Username: Abr  
Password: Pass  
Anda belum terdaftar
```

```
Process returned 0 (0x0)   execution time : 7.259 s  
Press any key to continue.  
|
```



THANK YOU!

