C Programming Lecture 2

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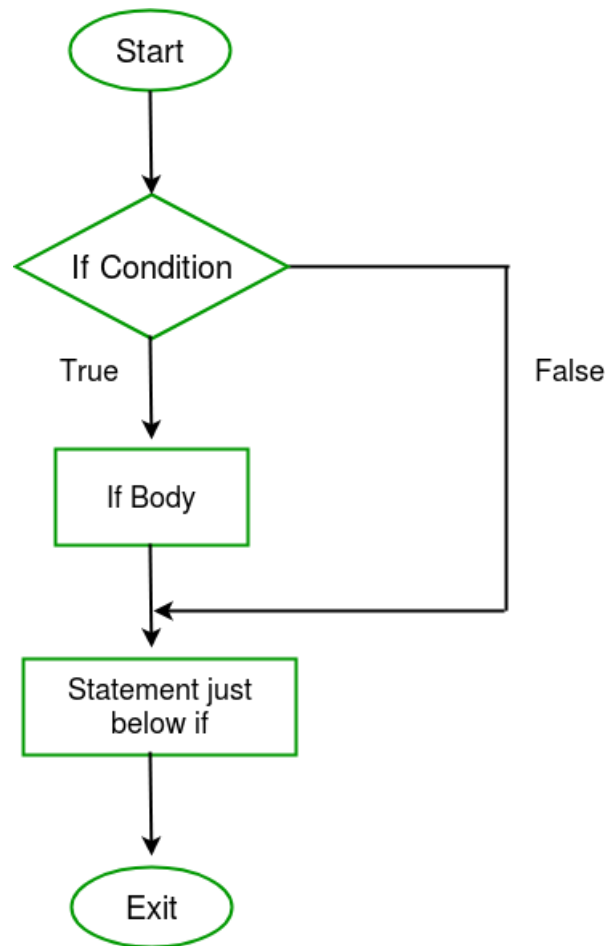
Recap

- C program structure
- Compile and Run C program
- C tokens
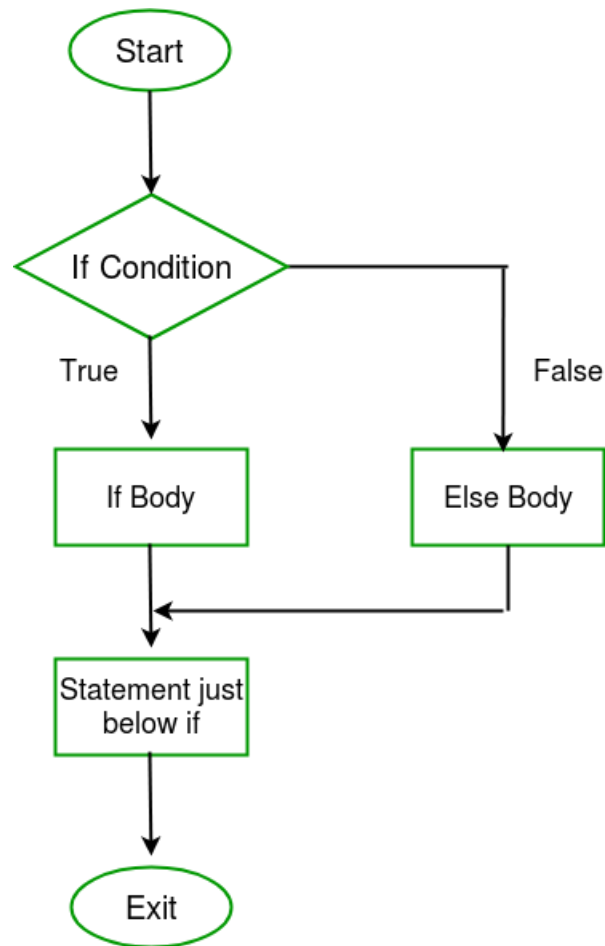- Variables
- Operators
- I/O operations

Decision making

- When we want to check some conditions and based on the truth value of the condition block code should be executed, decision making statements are used.

- Types of decision making structures
    1. If statement
    2. If else statement
    3. If else ledder
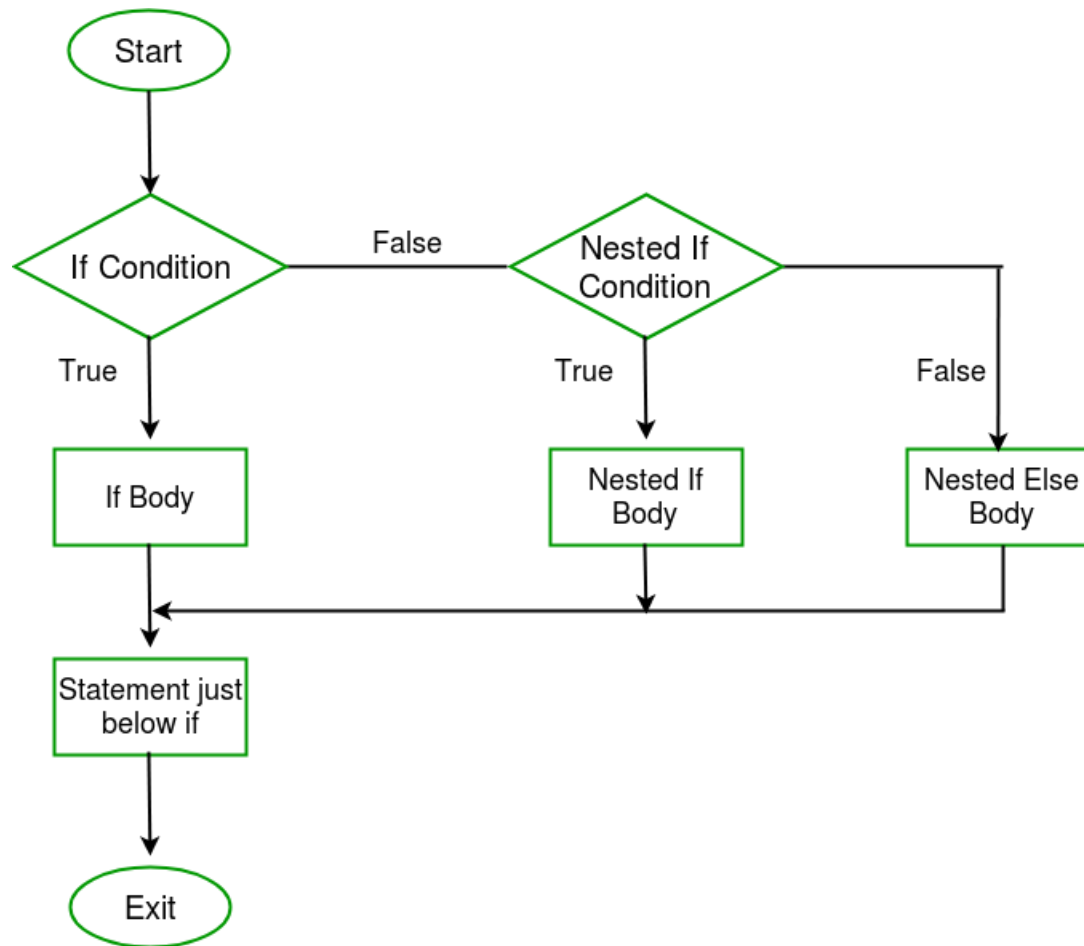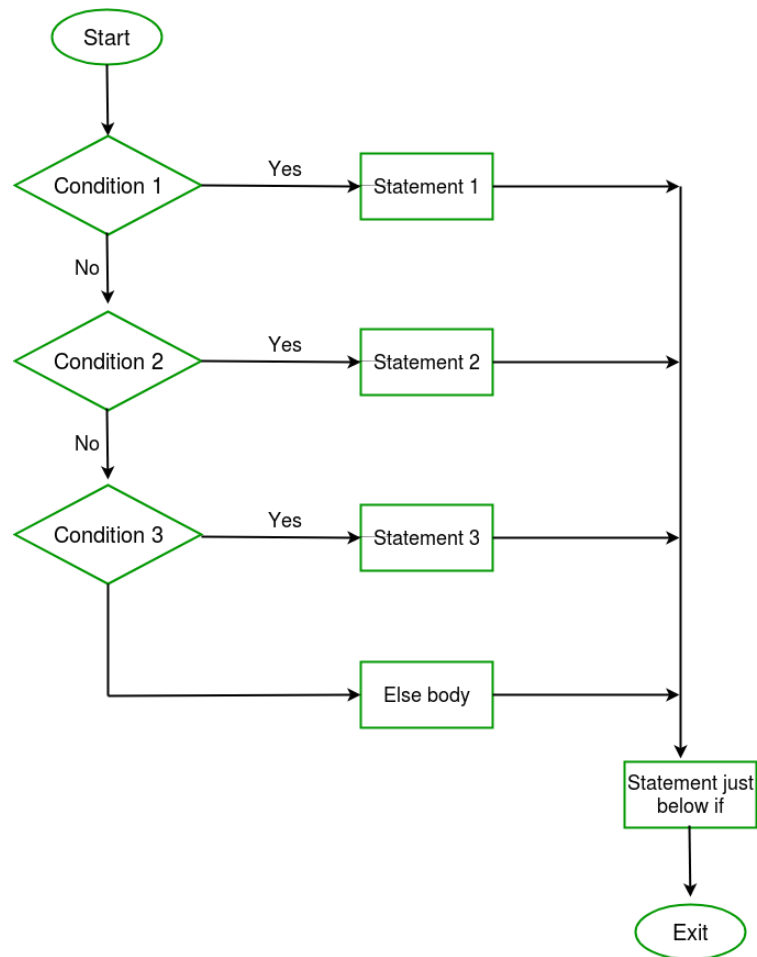   4. Nested if statement
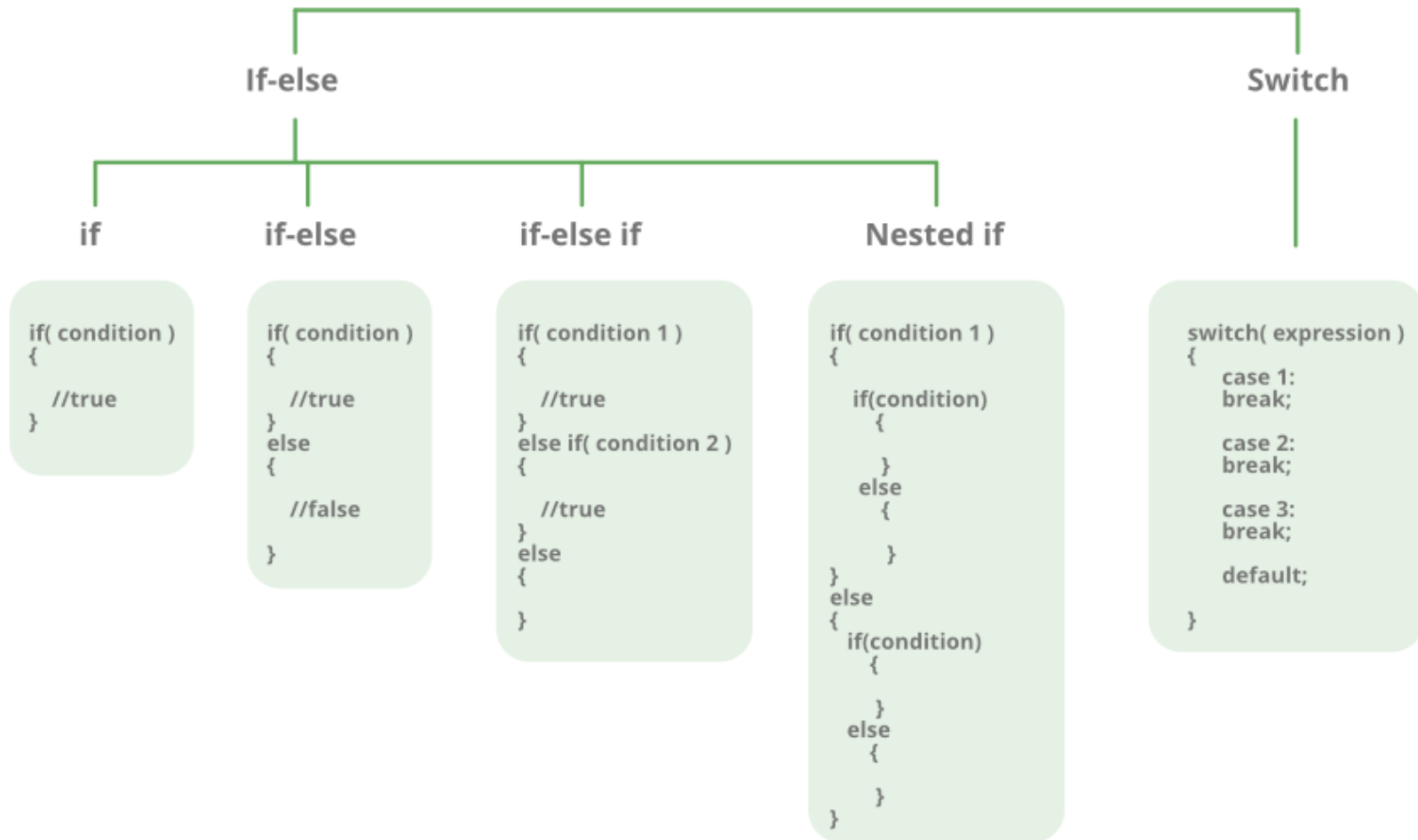   5. Switch case

If statement

If else

Nested if

If else ladder

Decision making syntax

Decision Making

If-else

    if

```
if( condition )
{
    //true
}
```

if-else

```
if( condition )
{
    //true
}
else
{
    //false
}
```

if-else if

```
if( condition 1 )
{
    //true
}
else if( condition 2 )
{
    //true
}
else
{
}
```

Nested if

```
if( condition 1 )
{
    if(condition)
    {
    }
    else
    {
    }
}
else
{
    if(condition)
    {
    }
    else
    {
    }
}
```

Switch

```
switch( expression )
{
    case 1:
    break;

    case 2:
    break;

    case 3:
    break;

    default;
}
```
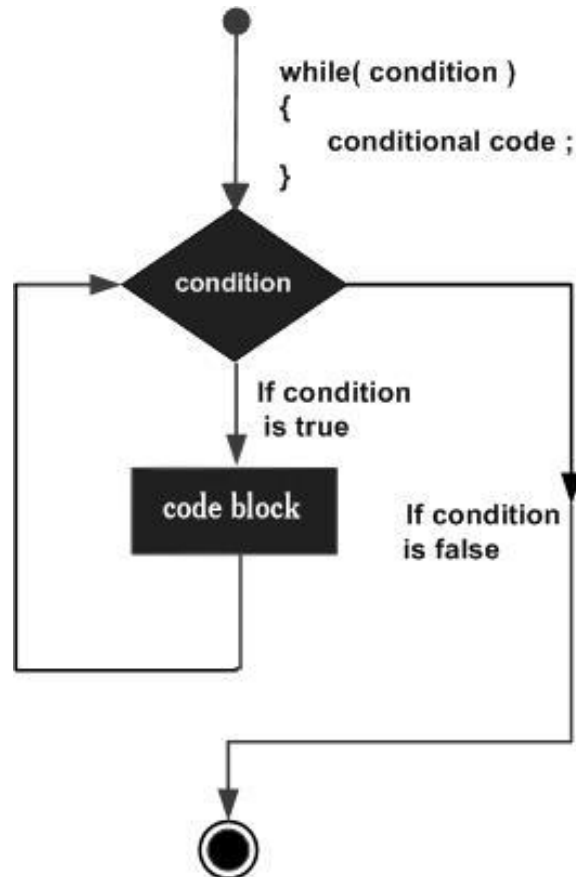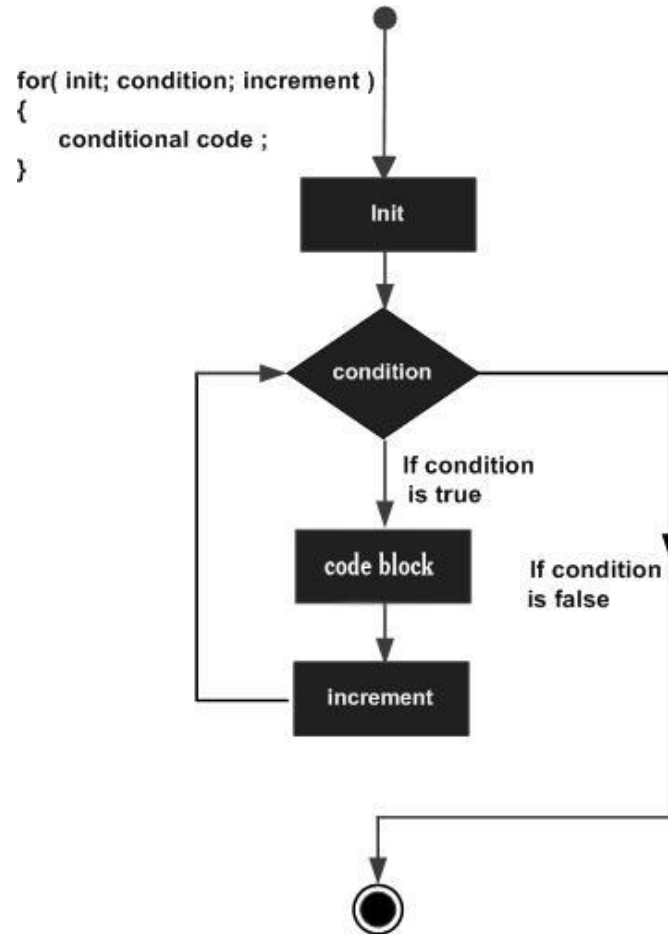
Loops

- When a block of code needs to be executed several number of times, loops are used.

- Types of loops executed:

  1. For loop
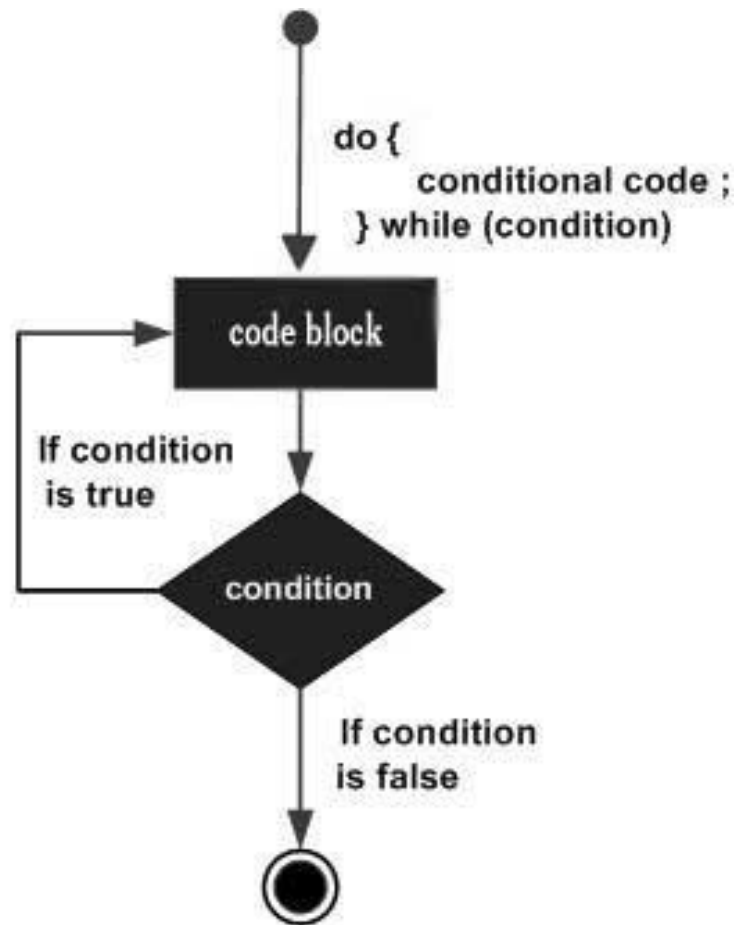 2. Do while loop
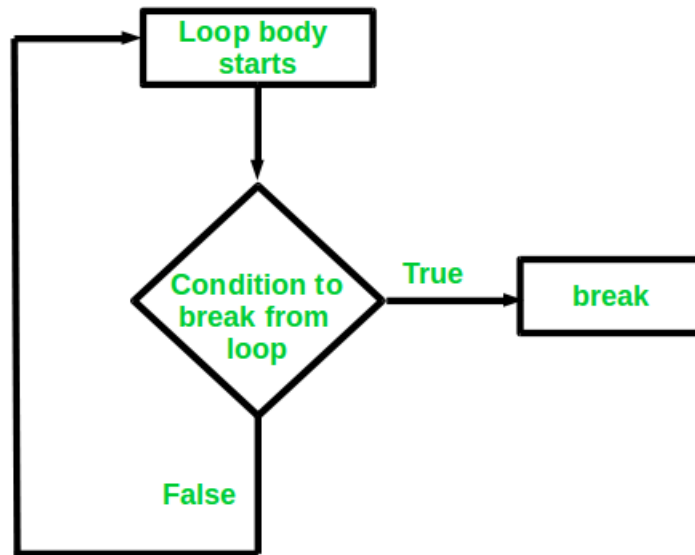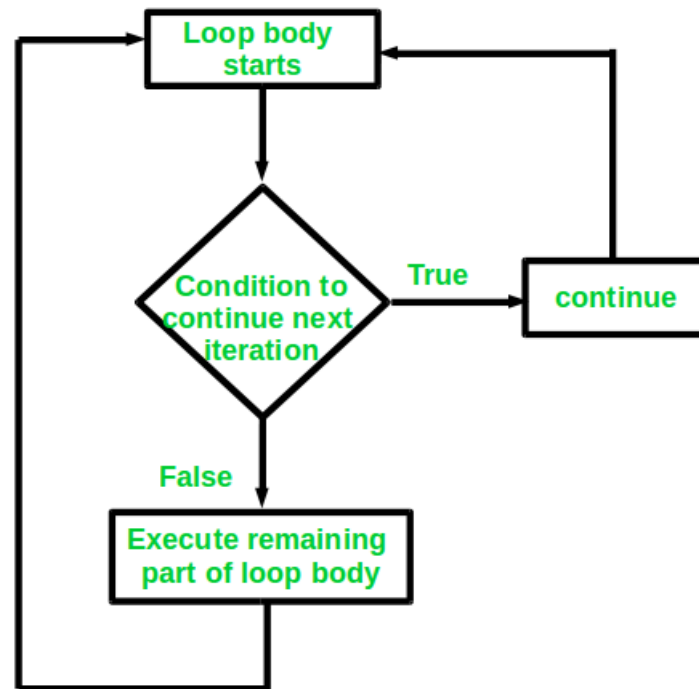 3. While loop

While loop

For loop


```
for( init; condition; increment )
{
    conditional code ;
}
```

Do while loop

Break statement

Continue

Go to statement

```c
#include <stdio.h>

// function to check even or not
void checkEvenOrNot(int num)
{
    if (num % 2 == 0)
        // jump to even
        goto even;
    else
        // jump to odd
        goto odd;

even:
    printf("%d is even", num);
    // return if even
    return;
odd:
    printf("%d is odd", num);
}

int main() {
    int num = 26;
    checkEvenOrNot(num);
    return 0;
}
```