FOR LOOP

ITERATION STATEMENT

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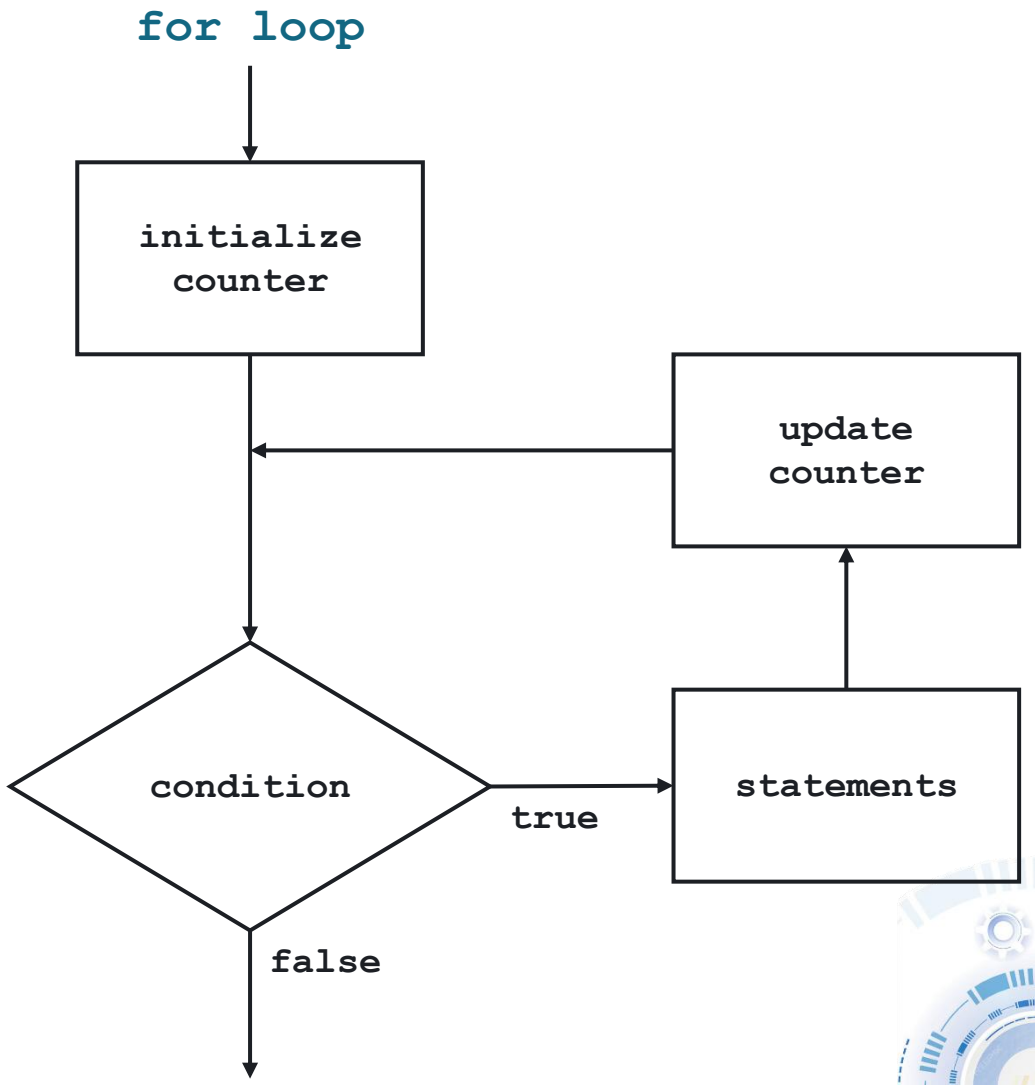
TOPIC OUTLINE

`for` Loop

FOR LOOP

FOR LOOP

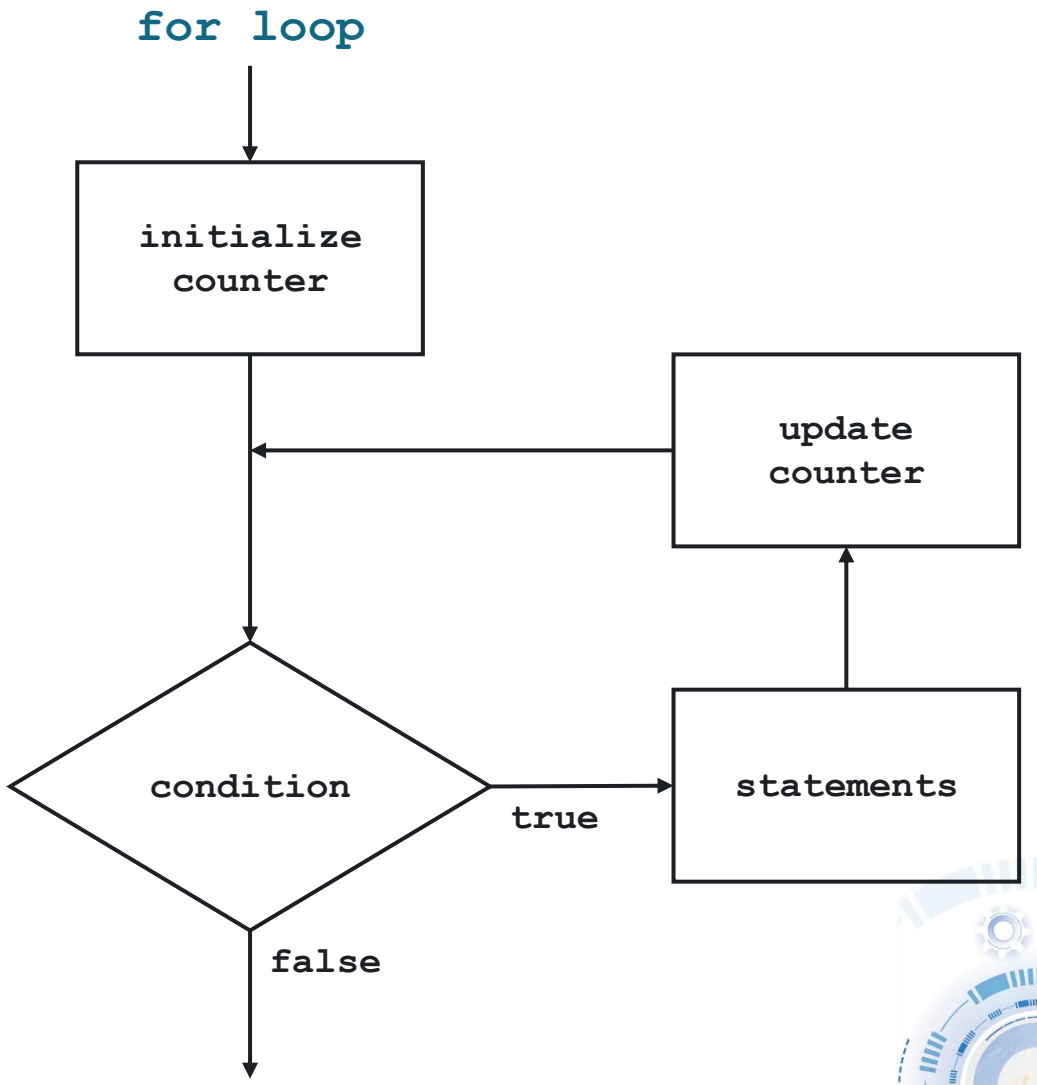
A `for` loop is a control flow statement that allows you to **repeatedly** execute a block of code a **specific number of times**. It is particularly useful when you know in advance how many times you want to iterate over a block of code.



FOR LOOP

Syntax of the `for` loop statement:

```
for(initialization;condition;update){
    // repeat code while the
    condition is true
}
```

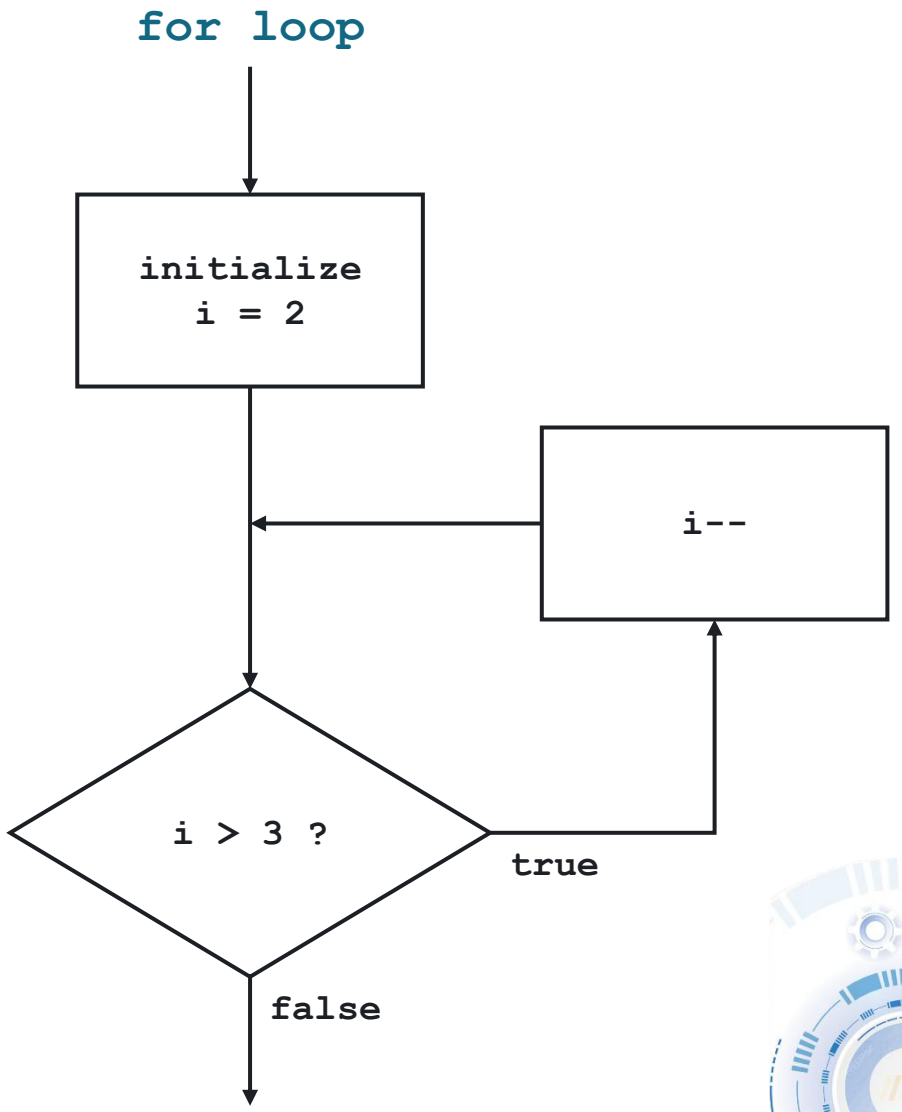


EXERCISE

```
for(int i = 2; i > 3; i--){

    cout << i;

}
```



EXERCISE

Compare the output of the **`while`** loop vs **`for`** loop code snippet:

```
int count = 0;
while(count <= 3 ){
    cout << count;
    count++;
}
```

output:

```
for(int i = 0; i <= 3; i++){
    cout << i;
}
```

output:

EXERCISE

Determine the output of this code snippet:

```
for(int a = 1; a <= 5; a++){
    cout << a;
}
```

output:

Determine the output of this code snippet:

```
for(int y = 5; y > 0; y--){
    cout << y << " ";
}
```

output:

EXERCISE

Determine the output of this code snippet:

```
for(int z = 10; z >= 0; z-=2){
    cout << z << " ";
}
```

output:

Determine the output of this code snippet:

```
int a = 0;
for(int z = 10; z >= 0; z-=2){
    cout << z << " ";
    cout << a;
    a++;
}
```

output:

EXERCISE

Determine the output of this code snippet:

```
for(int a = 0; a <= 10; a++){
    if(a % 2 == 0){
        cout << a << "\n";
    }
}
```

output:

Determine the output of this code snippet:

```
for (int i = 0; i < 3; i++){
    for (int j = 0; j < 3; j++){
        cout << i << j << endl;
    }
}
```

output:

LABORATORY