Lecture 9

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There are 10 types of people in this world: those who understand binary and those who don't. - Anon
Programming is thinking, not typing. - Good Programming
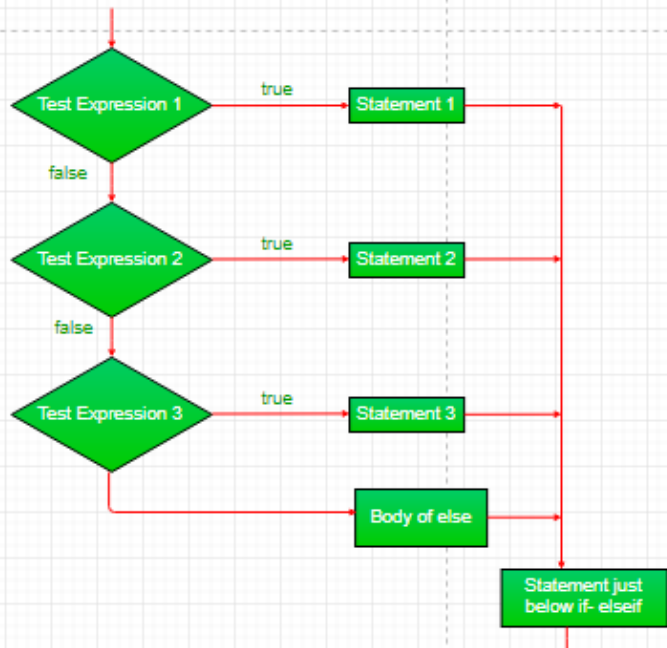
Conditional statements

- `if`
- `if-else`
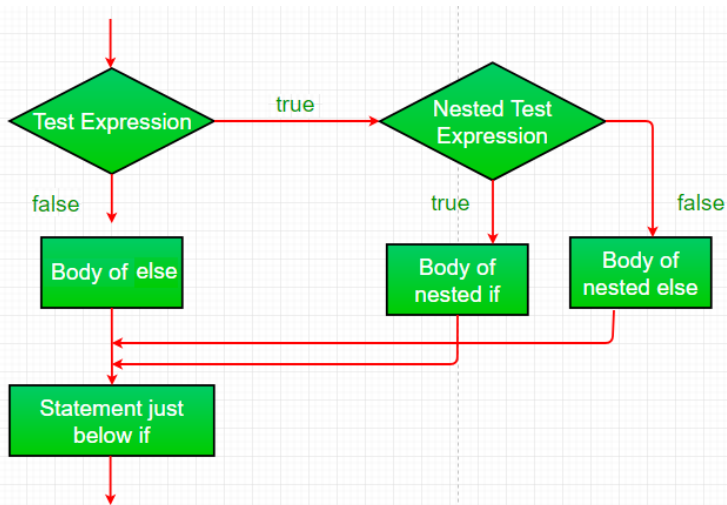- `if-elseif-else` (./29-ifStatement.cpp)
- `switch`

if statement

```
if(1 == 2)
   cout << "We are living in an insane world." << endl;
cout << "But we love the world" << endl;
```
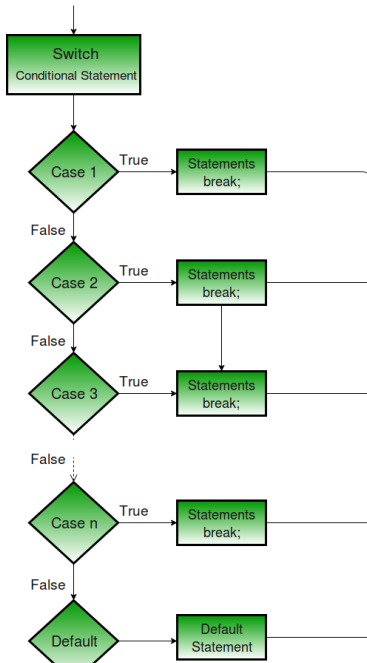
 ▶ Works for any boolean datatype

if-elseif-else

Nested if

switch statement

switch statement

- ▶ Works for `char`, `int` and `string`
- ▶ Not on `bool`
- ▶ No way of giving range of variables
- ▶ Faster if large number of conditions exists because of compiler optimisation

Conditional execution

- `break` statement
  - May be useful to break out of `for` and `while` loops
  - (./30a-break.cpp)
- `continue` statement
  - Breaks iterations for which a condition is satisfied

Macros

- Replaces a string (PI) by another string (3.1415)
- Replaces a function also!!!

(./27-hashDefine.cpp)

- Better alternative are the `inline` functions (To be discussed next week.)

Not a number (nan)

```
cout << 1/0 << endl;
cout << sqrt(-2) << endl;
```

It can be checked using

- ▶ isnan() or
- ▶ a==a

String as array of characters

```
char dog[8] = {'a', 'b', 'c', 'd', 'e', ' ', 'f', 'g'};
char cat[8] = {'a', 'b', 'c', 'd', 'e', ' ', 'f', '\0'};
```

All strings end with a null character (\0). Hence, cat is a string and dog is not.