Functions

- Sequence of statements with a name

- By calling the function the sequence of statements will be executed.

```cpp
void swap(int& fir, int& sec){
    int tmp(fir);
    fir = sec;
    sec = tmp;
}

int a{2011};
int b{2014};

swap(a, b);
```

Alternative Function Syntax

- The alternative function syntax is introduced by `auto`.

```
auto func( para ) -> returntype { functionbody }

auto sum(int a, int b) -> int { return a + b;}
int  sum(int a, int b)      { return a + b;}
```

- The new syntax is obligatory for
  - lambda functions.
  - the automatic return type (only C++11) deduction.

Default Arguments

- Function parameters can have defaults

```
bool isTempOK(const int t, const int low = 20, const int high = 50);
```

- The default argument is used if not argument is provided.
- The default arguments have to be the last parameters.
- The values will be assigned from left to right.
- The remaining parameters get their defaults.