

Function Template - FAQ

• `max()` function is giving error

`max()` is a inbuilt function in C++.

Change the name to `maxim()`

• Can we have a template function along with default argument?

Yes you can use

• class vs typename

Both are same. You can use any one

• Can we initialise template variable

No you cannot initialize the template variable name because its built-in keyword in c++

Default Arguments

• Can a default argument function also be a template

Yes

• Default values should be filled from which side

Default values for formal arguments must be filled from right side without skipping any parameter.

Function Overloading -FAQ

• What is signature/prototype?

The header of a function is called as signature or prototype.

Example:

```
int fun(int x,float y);
```

• Two functions with same name. Are they overloaded ?

Yes, they are overloaded functions if their parameters are different.

• Is the return type considered in overloading?

No.

• Two functions with same name and parameters, but different return type. Are they overloaded?

No. Return type is not considered in overloading.

Example:

These are not overloaded

```
int fun(int x, int y)
```

```
float fun(int x, int y)
```

• Are these functions overloaded?

int fun(int x, float y) and int fun(float x, int y)

Yes. They are overloaded

Functions - FAQ

● Will the functions occupy space in memory?

Yes, the machine code of a function is kept code section.

● Will a function occupy space even if it is not called?

Yes, if a function is defined in a program or included from library, it will occupy space in code section.

● Where the memory for variable of a function is created?

Memory for the variables used in a function is created in stack

● When the memory for variables will be allocated?

Memory for the variables will be allocated at runtime, when the function is called and deleted when function ends.

● Is the memory for variables is allocated freshly for each call?

For for each call of a function memory for the variables is created freshly in the stack.

● What is return type of a function?

When a function is called by passing parameters, it will compute and get the results. A function can return the result to a calling function.

Return type is the datatype of a value return by the function.

● What is void?

If a function is not returning any value then tis return type is mentioned as void.

• Difference between `int main()` and `void main()`

`void main()` means main function is not returning any value.

`int main()` means main function will return 0; 0 is a success code.

The function have terminated successfully. `main()` will return the value to operating system, like windows.

In C++ `int main()` is standard.