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***TASK TITLE Functions (Regular, Arrow), Scope***

**🔧 Functions**

Functions are reusable blocks of code that perform specific tasks.

**1. Regular Function (C++)**

Defined with a return type, name, and parameters.

int add(int a, int b) {

return a + b;

}

**2. Arrow Function (C++ Lambda Expression)**

Introduced in C++11, mainly used for short, inline functions.

auto add = [](int a, int b) -> int {

return a + b;

};

* [] – capture list
* (int a, int b) – parameters
* -> int – return type (optional if auto-deduced)
* {} – function body

**📍 Scope**

Scope determines **where a variable can be accessed**.

**1. Local Scope**

Declared inside a function/block. Not accessible outside.

void func() {

int x = 10; // local to func

}

**2. Global Scope**

Declared outside all functions. Accessible anywhere.

int x = 20; // global

void func() {

cout << x; // accessible

}

**3. Block Scope**

Variables declared inside {} only exist within that block.