

INTRODUCTION TO C++  
LESSON 1: Introduction

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## 1 Introduction

C++ is widely used, from embedded systems to Python reference implementation.

## 2 Modern C++

- static type safety
- resources safety
- abstraction
- encapsulation; invariants
- generic programming
- multiparadigm

## 3 C(++): a compiled language

With both C and C++, source code needs to be compiled into assembly language, which will then be translated to machine code (binary).

## 4 Syntax - Declaration and instruction

### 4.1 Declare variables

```
1 int capacity;  
2 float height;
```

## 4.2 Declare and initialize variables (adivsed!)

```
1 int capacity = 1;  
2 float height = 0.5F;
```

## 4.3 Instructions

```
1 ...
```