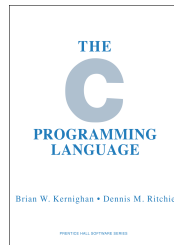
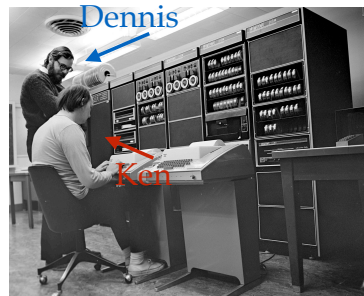


History

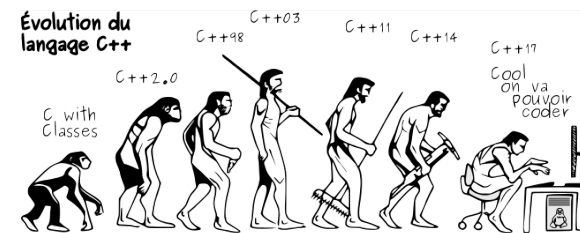
- **Ken Thompson** created the **B** language while developing UNIX (implemented in assembly) at **Bell Labs** [1970]
 - ✓ slow and interpreted
- **Dennis Ritchie** began development of a compiler for B and could produce executable code [1972]
 - ✓ became known as the C language
 - ✓ Linux kernel reimplemented in C



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History

- **Bjarne Stroustrup** began the development of C++ (also from Bell Labs) [1980]
 - ✓ object oriented, **generic**, **functional**



<https://github.com/cpp-frug/materials/tree/gh-pages/images>

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C++?

- **Static type system**
 - ✓ prevents unintended operations
 - ✓ optimized machine code (i.e. faster and/or using less memory)
- Object oriented language
 - ✓ improves maintainability
- When to use it?
 - ✓ performance matters
 - ✓ developing time is less important
 - ✓ specialized libraries require it

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C/C++?

- Pros
 - ✓ vast documentation freely available
 - ✓ provides different levels of abstraction (from data structures to memory management)
 - ✓ it is compiled
 - ✓ high performance
- Cons
 - ✓ steep learning curve
 - ✓ large language
 - ✓ no automatic **memory management** (can be an advantage)
 - ✓ requires attention to minor details
 - ✓ GUIs only available through extensive libraries (less portable)

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