

A job ready bootcamp in C++, DSA and IOT

History of C/C++



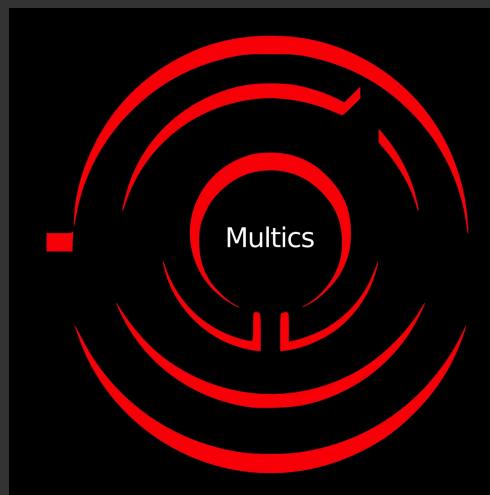
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Agenda

- ① MULTICS
- ② Evolution of C language
- ③ Evolution of C++ language
- ④ Version History

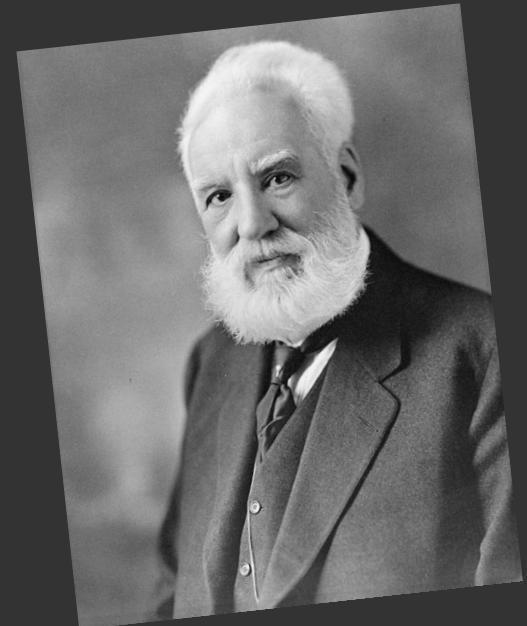
MULTICS

- Multiplexed Information and Computing Service
- It is an operating system
- Planning and development started in 1964
- Initially it was a cooperative project led by MIT along with GE and Bell Labs.
- It was developed on the GE 645 computer



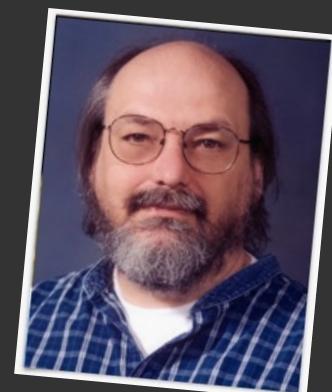
AT & T's Bell Labs

- American Telephone & Telegraph
- Alexander Graham Bell
- AT&T was founded in 1885
- 9 Nobel Prizes have been awarded for work completed at Bell Labs.
- Languages Developed at Bell Labs — B, C, C++, S, SNOBOL, AWK, AMPL
- It was acquired by NOKIA in 2016



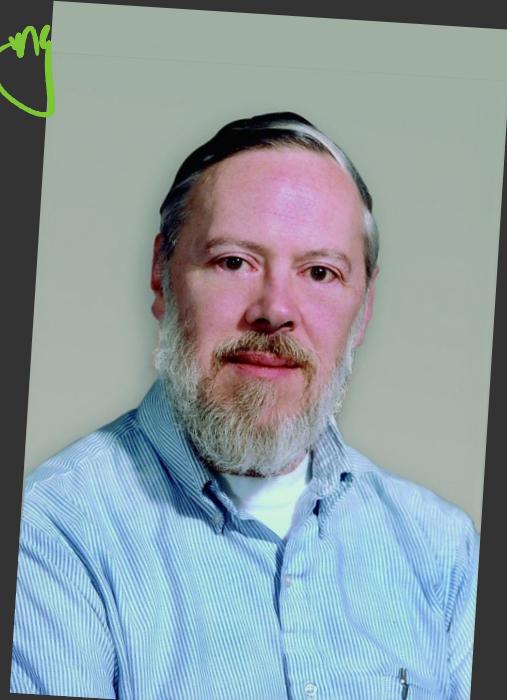
Bell labs pulled out of MULTICS

- Bell labs pulled out of the project in 1969.
- Ken Thompson & Dennis Ritchie were their on MULTICS project from AT&T
- Ken Thompson decided to build his own Operating System
- BCPL - Basic Combined Programming Language
- Ken Thompson derived a new language from BCPL, known as B Language



Evolution of C Language

In 1972, Dennis Ritchie developed the compiled programming language C as a replacement for the interpreted language B.



Unix operating system was written in B language first and then re-written in C language. C has consistently ranked among the top two languages in TIOBE index. (A measure of the popularity of prog. lang.)

Evolution of C++

Danish Computer Scientist
Bjarne Stroustrup developed
C++ language as an extension
of C language.



Initially, it was known as 'C with Classes'
Later in 1985, it was declared
as a separate programming language
'C++ language'

Evolution of C++

- . Stroustrup found that SIMULA had features that were very helpful for large software development, but the language was too slow for practical use, while BCPL was fast but very low level to be suitable for large software development.
He decided to enhance C language with SIMULA like features.
He added features to C compiler, including classes, derived classes, strong typing, inlining and default arguments.

Evolution of C++

In 1982, Stroustrup started to develop a successor to 'C with classes', which he named "C++".

New features were added like virtual functions, operator overloading, references, new & delete and single line comment (//)

In 1985, first commercial version of C++ was released.

C++ ranked 4th on TIOBE index after Python, C and Java

Version History of C

- K & R - 1978 $x=-5 \rightarrow x=5$
- ANSI C - 1983
- C89 - 1989
- C90 - 1990
- C95 - 1995
- C99 - 1999 Single line comment, variable length arrays
- C11 - 2011 ~~gets()~~ fgets()
- C17 - 2018 Only bug fixes

Version History of C++

1979 → inception of C++

1985 → First version

1989 → C++ 2.0 multiple inheritance, abstract classes, static functions, protected members

1998 → C++98 first standard version.

2003 → C++ 03 majorly for bug fixes and library defects.

2011 → C++ 11 lambdas

2014 → C++ 14 Binary literals, digit separator

2017 → C++ 17 Syntax cleanup, new algorithms

2020 → C++ 20 $\langle \Rightarrow \rangle$, new keywords, volatile
new operator has been deprecated