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26+ Years of Experience

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لا تنسى الاشتراك في قناتنا على اليوتيوب ومشاركة القناة مع اصدقائك
لتعم الفائدة للجميع وانقاذ الاف الناس من التشتت وجزاكم الله خيرا

لا تنسونا من دعائكم وادعو لوالدي بالرحمة

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مهم جداً

هذا الملف للمراجعة السريعة واخذ الملاحظات عليه فقط، لانه يحتوي على اقل من 20٪ مما يتم شرحه في الفيديوهات

الاستعجال والاعتماد عليه فقط سوف يجعلك تخسر كميه معلومات وخبرات كثيره

يجب عليك مشاهدة فيديو الدرس كاملا

لاتنسى عمل لايك ومشاركة القناة لتعم الفائدة للجميع

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اساسيات مهمه لكل مبرمج

لماذا يجب البدء بلغة سي++؟

C++ = Salary++

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Computer Foundations
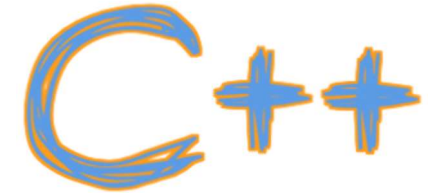
What is C++?

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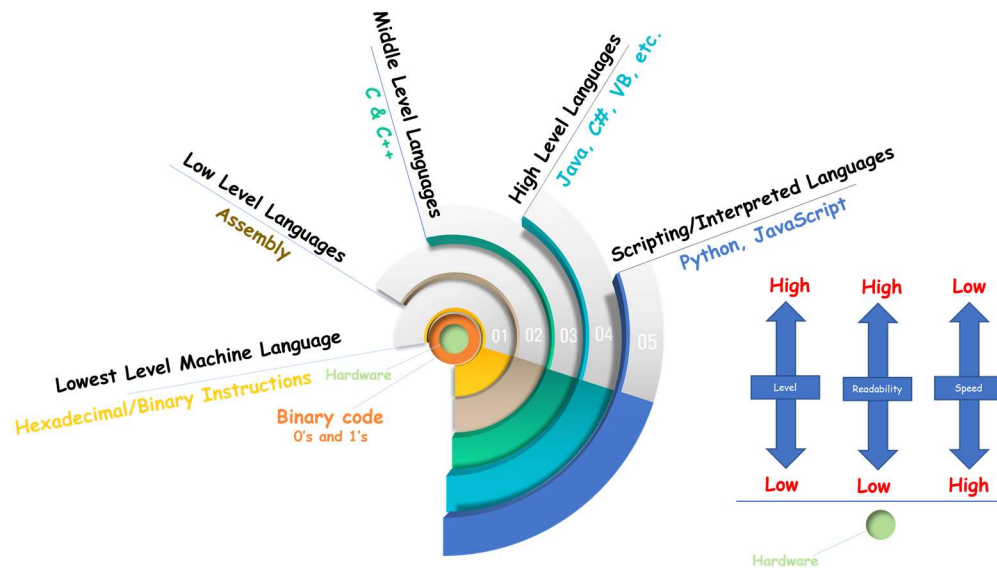
What/Why C++?

C++

- C++ is a **cross-platform/Portable language** that can be used to create <u>high-performance applications</u> that can be adapted to multiple platforms

- C++ is fun and easy to learn!

- C++ is the mother of all languages.

- It Supports Procedural & OOP programming.

- It will force you learn basic programming concepts.

- If you learn it very well, you can learn any other programming language in less than a month's time.

What/Why C++?

- Both C and C++ are considered Mid-level languages that are close to hardware and are able to program and manipulate the underlying hardware resources.

- C and C++ have full control on computer resources such as memory, no automatic memory management.

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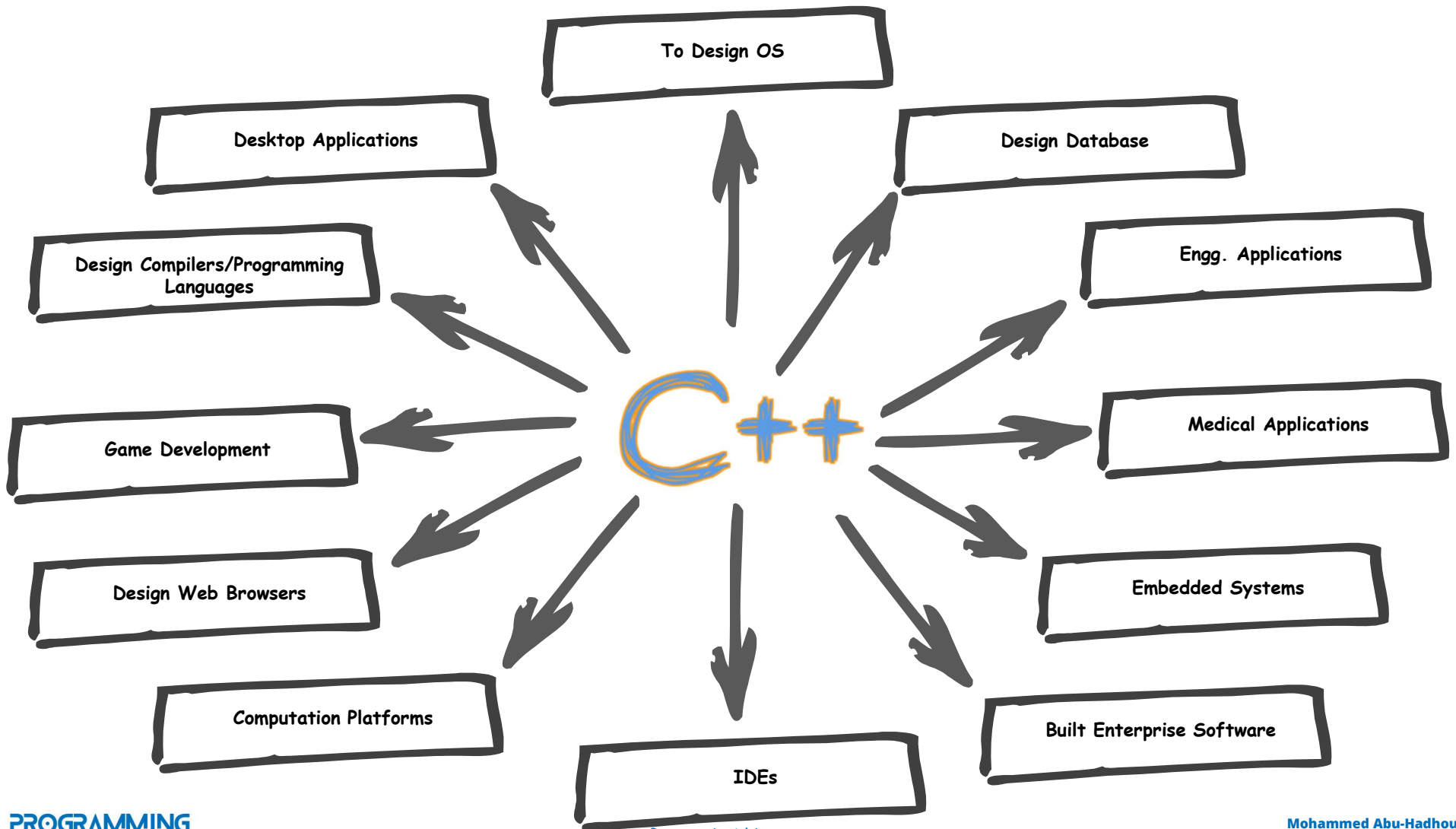
Computer Foundations

What can you do with C++?

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To Design OS

Design Database

Desktop Applications

Engg. Applications

Design Compilers/Programming Languages

C++

Medical Applications

Game Development

Embedded Systems

Design Web Browsers

Built Enterprise Software

Computation Platforms

IDEs

Computer Foundations

Real Things done using C++

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Operating Systems:

Most of the software from Microsoft is developed using C++ (flavors of Visual C++).
Applications like **Windows 95, ME, 98; XP**, etc. are written in C++.
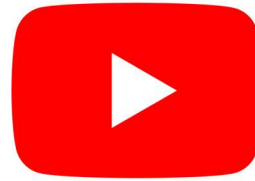
Apple OS X has <u>some of its parts</u> written in C++. Similarly, some parts of the iPod are also written in C++.

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Applications:
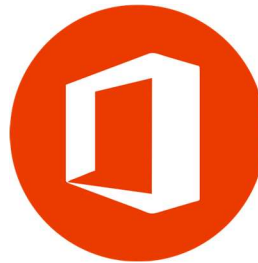

Most of the applications of the adobe systems including **Illustrator**, **Photoshop**, etc.

Core Functions are written in C++

Microsoft products like **Word**, **Excel**, **PowerPoint**...etc

Amazon was primarily written in C++. Now C++ is mainly responsible for processing requests.

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Browsers:

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Databases:

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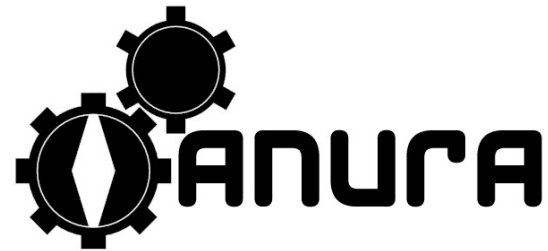MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD
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Gaming Engines:

A game engine is a dedicated software or an architecture, or program that developers use for creating games

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IDEs:

Visual Studio

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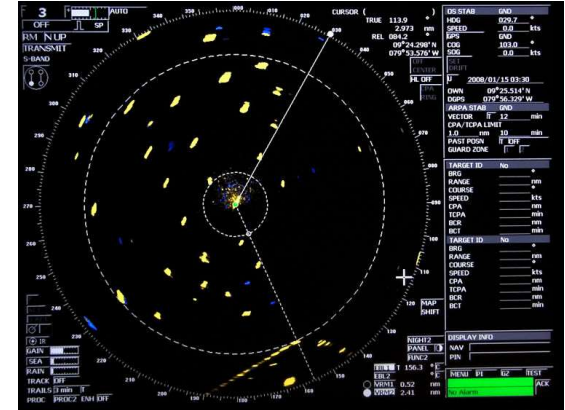MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD
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Enterprise Software

C++ is used in developing many enterprise software as well as advanced applications like **flight simulation** and **radar processing**.

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Compilers and Programming Languages

Compilers of **various high-level programming languages** are written either in C or C++.

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Embedded Systems

CARs, Flights, Medical Machines, and others

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Libraries

When we require very **high-level mathematical computations, performance and speed** become important. Hence most of the libraries use C++ as their core programming language. **Most high-level machine language libraries use C++** as **backend**

C++ is faster than most of the other programming languages and also supports multithreading with concurrency.

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Banking Applications

As C++ aids in concurrency, **it becomes the default choice for banking applications** that require multi-threading, concurrency, and high performance.

Infosys Finacle – is a popular core banking application that uses C++ as backend programming languages.

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Advanced Computation And Graphics

C++ is useful in developing an application that requires **high-performance image processing, real-time physical simulations**, and **mobile sensor applications** that need high performance and speed.

Maya 3D software from Alias system is developed in C++ and is used for **animation**, **virtual reality**, **3D graphics**, and environments.

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Cloud/Distributed Systems

Cloud storage systems that are extensively used nowadays work close to the hardware. C++ becomes a default choice for implementing such systems as it is close to the hardware. C++ also provides multithreading support that can build concurrent applications and load tolerance.


Bloomberg is a distributed RDBMS application that is used for accurately **providing real-time financial information and news to investors**.

While Bloomberg's RDBMS is written in C, its development environment and set of libraries are written in C++.

Therefore, when you talk about...

- Performance
- Speed
- Cross Platform/Adaptable
- High-level mathematical computations
- Multithreading with concurrency

IT's... C++
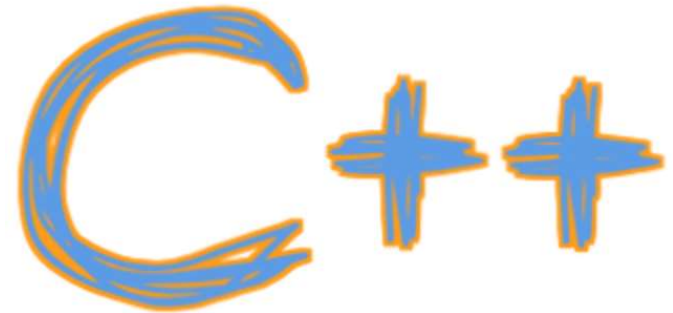
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Computer Foundations

Why C++ not C?

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C vs C++

Similarities

- Both the languages have a **similar Syntax/Grammar/Code Structure**.
- The **compilation** of both the languages is similar.
- Both are **Mid-level languages that are close to hardware** and are able to program and manipulate the underlying hardware resources.

Differences..

C

- C was developed by Dennis Ritchie between the year 1969 and 1973 at AT&T Bell Labs.
- C is a subset of C++.
- Procedural Language.

C++

- C++ was developed by Bjarne Stroustrup in 1979.
- C++ Superset of C.
- Supports both Procedural and OOP.

That's why you should learn C++ not C, it will take the same efforts

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Why to start with C++ not JAVA?

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C++ vs Java

- Both the great languages.

  However, its recommended to start with C++ because:

C++
Supports both Procedural and OOP.

Java
Supports Only OOP.

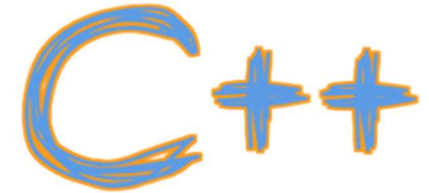**That's why you should start with C++, you will learn all types of programming.**

Will I work in C++?

- Yes and No.

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Is it outdated and not used

- No, it still widely used for high performance systems.

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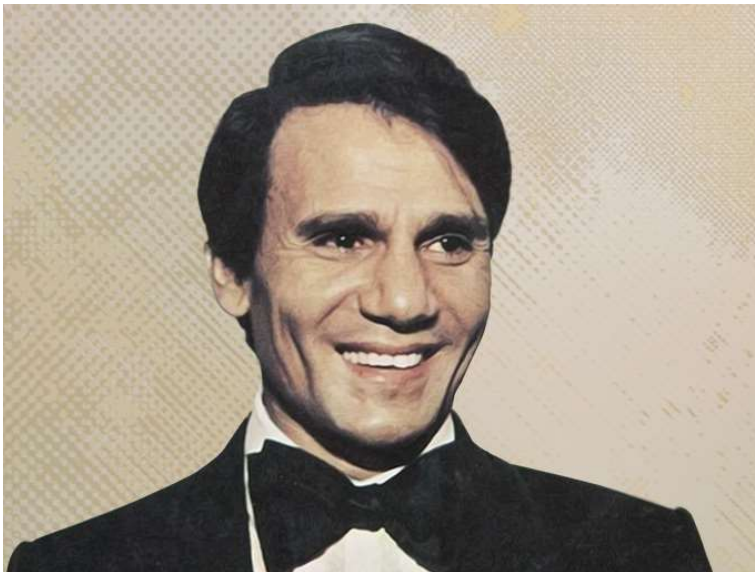
And remember !!!!!

IF you learn C++,
you can learn any
other programming
language easily in
almost not time.

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C++ Developer learning Python

Python Developer Learning C++

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Thank you ☺

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