What is C#?

This lesson discusses the features of C# and its similarities with other languages

WE'LL COVER THE FOLLOWING

Features of C#

Although C# is derived from the C programming language, it has features such as garbage collection that allow beginners to become proficient in C# more quickly than in C or C++. Similar to Java it is:

- object-oriented
- Comes with an extensive class library
- Supports exception handling
- Multiple types of polymorphism
- Separation of interfaces from implementations

Uses of C#

Above mentioned features, combined with its powerful development tools, multi-platform support, and generics, make **C#** a good choice for many types of software development projects such as:

- Rapid application development projects
- Projects implemented by individuals or large or small teams
- Internet applications
- Projects with strict reliability requirements
- Testing frameworks such as NUnit make C# amenable to test-driven development and thus a good language for use with Extreme

Programming (XP).

Its strong typing helps to prevent many programming errors that are common in weakly typed languages. Because of these similarities to other languages, it is possible to introduce **C#** as a language with features of **C++** in addition to having the programming style of **Java**.

A large part of the power of **C#** (as with other **.NET** languages), comes with the common **.NET Framework API**, which provides a large set of classes, including ones for encryption, **TCP/IP** *socket* programming, and graphics. Developers can thus write part of an application in **C#** and another part in another **.NET** language (e.g VB.NET), keeping the tools, library, and object-oriented development model while only having to learn the new language syntax.

Because of the similarities between **C#** and the **C** family of languages, as well as **Java**, a developer with a background in object-oriented languages like **C++** may find **C#** structure and syntax intuitive.

Now let's delve into the basics of C# and learn how to write a simple **"Hello World!"** program.