**Programming languages**

The programming language **C** is a low level programming language developed between 1969 and 1973. **C** is one of the most widely used programming languages all the times. It is usually used for system programming, making drivers, etc. Some reasons for choosing **C** over interpreted languages are its speed, stability, and near-universal availability.

**C ++** is middle level programming language. It began as enhancements to **C**, first adding classes, then virtual functions, operator overloading, multiple inheritance, templates and exception handling, among other features. The language is one of the most popular programming languages usually used for applicational software, drivers and its implemented on wide variety of hardware and operating system platforms. Main differences between C ++ and C# are:

1. C# is a managed language that runs in a virtual machine. It compiles down to a platform agnostic intermediate code. C++ creates raw assemblies that run directly on the target platform.
2. C# does not support multiple inheritance, C++ does.
3. C# assemblies contain metadata about the code, allowing for runtime inspection. C++ does not contain this metadata, so the best you can do is fancy template programming.

**Java** is a “ C- like “ object oriented programming language. It is very popular our days and a lot of developers use it. It is cross platform language, so it gives it advantage to some other high level languages. The language derives much of its syntax from C and C++, but it has fewer low-level facilities than either of them. The Android SDK uses the **Java** language as the basis for Android applications. Some of the differences between C# and Java are:

1. C# doesn't have checked exceptions
2. Java doesn't allow the creation of user-defined value types
3. Java doesn't have operator and conversion overloading
4. Java doesn't have iterator blocks for simple implemetation of iterators
5. Java doesn't have anything like LINQ
6. Partly due to not having delegates, Java doesn't have anything quite like anonymous methods and lambda expressions. Anonymous inner classes usually fill these roles, but clunkily.
7. Java doesn't have expression trees
8. C# doesn't have anonymous inner classes
9. C# doesn't have Java's inner classes at all, in fact - all nested classes in C# are like Java's static nested classes
10. Java doesn't have static classes (which don't have *any* instance constructors, and can't be used for variables, parameters etc)

**JavaScript** is a “ C- like ” script language. It is one of the most modern languages our days. It gives the developers opportunity to create interactive web sites, desktop applications and even games.  It is a multi-paradigm language, supporting object-oriented, imperative, and functional  programming styles. It is part of **HTML5** and probably soon will be the most popular language in the IT industry. JavaScript is scripting language, but C# is not.

**PHP** is a server-side scripting language designed for web development but also used as a general-purpose programming language. **PHP** is now installed on more than 244 million websites and 2.1 million web servers. It is also “C- like” language. Since version of 5.3 it is object oriented. The main difference between **PHP** and **C#** is that **PHP** is scripting language, C#’s code need to be first pre-compiled into something called MSIL (Microsoft Intermediate Language) and then translated into actual executables.

**Python** is a widely used general-purpose, high-level programming language. Its design philosophy emphasizes code readability, and its syntax allows programmers to express concepts in fewer lines of code than would be possible in languages such as **C**. Python supports multiple programming paradigms, including object - oriented, imperative and functional programming or procedural styles. It features a dynamic type system and automatic memory management and has a large and comprehensive standard library. Like other dynamic languages, **Python** is often used as a scripting language, but is also used in a wide range of non-scripting contexts. **Python** interpreters are available for many operating systems.