



# 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 لا تنسونا من دعائكم

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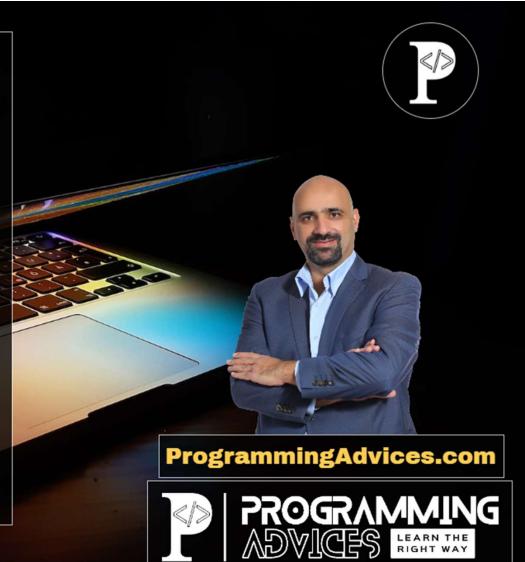


#### **Programming - Level 1**

Just In Time Compiler (JIT)

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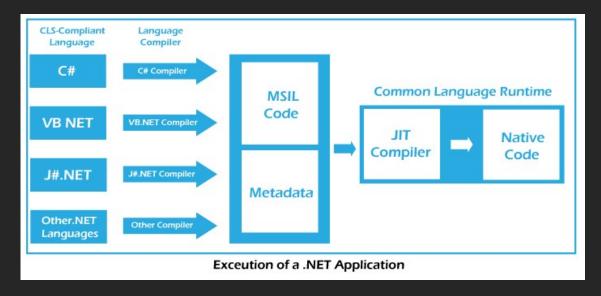
## CLR Main Components:

- Common type system (CTS)
- Common language speciation (CLS)
- Garbage Collector (GC)
- Just in Time Compiler (JIT)
- Metadata and Assemblies



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It converts the MSIL code into native code (i.e., machine-specific code). The .NET program is compiled either explicitly or implicitly.

The developer or programmer calls a particular compiler to compile the program in the explicit compilation. In implicit compilation, the program is compiled twice. The source code is compiled into Microsoft Intermediate Language (MSIL) during the first compilation process.

The MSIL code is converted into native code in the second compilation process. This process is called JIT compilation.



The .NET program is compiled either explicitly or implicitly.

There are three types of JIT compilers -Pre, Econo, and Normal.

- 1. <u>Pre JIT Compiler (AOT Ahead Of Time)</u>: compiles entire MSIL code into native code before execution.
- 2. <u>Econo JIT:</u> Compiler compiles only those parts of MSIL code required during execution and <u>removes those parts that are not required anymore</u>.
- 3. <u>Normal JIT (Default):</u> Compiler also compiles only those parts of MSIL code required during execution but places them in cache for future use. It does not require recompilations of already used parts as they have been placed in cache memory.



The .NET program is compiled either explicitly or implicitly.

#### There are three types:

- 1. Pre JIT Compiler (AOT Ahead Of Time): (Ngen.exe) , everything compiles before start, No compilation at runtime.
- 2. Econo JIT: Compiled and not cached (each time it will compile again).
- 3. Normal JIT (Default): only used code is Compiled + Cached.



