# Day01 DEPI C#

## 1- Overhead at runtime (Jitting)
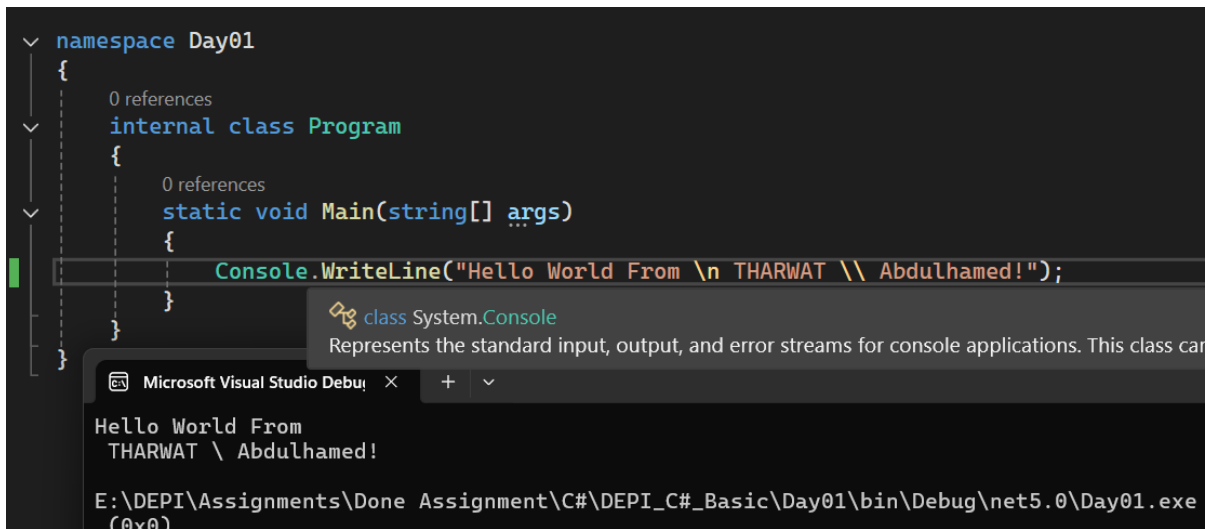
➤ *What is done to reduce this?*

***JIT*** *= Just-In-Time compilation*

*reduce  overhead:*

- استخدام ***ReadyToRun (R2R)*** في *NET Core*. لنشر *precompiled code.*

- استخدام ***NGEN.exe*** في.*NET Framework*.

- الاعتماد على  *compilation* ***AOT (Ahead-Of-Time)*** في بعض الحالات.

## 2- *Hello World From VS Code*

```
namespace Day01
{
    0 references
    internal class Program
    {
        0 references
        static void Main(string[] args)
        {
            Console.WriteLine("Hello World From \n THARWAT \\ Abdulhamed!");
        }
    }
}
```

class System.Console
Represents the standard input, output, and error streams for console applications. This class ca

Microsoft Visual Studio Debu    ×    +    ∨

```
Hello World From
 THARWAT \ Abdulhamed!

E:\DEPI\Assignments\Done Assignment\C#\DEPI_C#_Basic\Day01\bin\Debug\net5.0\Day01.exe
(0x0).
```

# 3- Report (Dotnet Versions, Namespace, Core, Solution)

## .NET Versions Overview

- **.NET Framework**: Windows-only, started from v1.0 to v4.8

- **.NET Core**: Cross-platform, modular, faster; versions from 1.0 to 3.1

- **.NET 5+**: Unified platform, combines .NET Core & .NET Framework (latest is .NET 9)

## Namespaces in .NET

- Logical grouping of related classes

- Help avoid naming conflicts

- Example: `System.Collections`, `MyApp.Services`

## What is .NET Core?

- A free, open-source, cross-platform framework by Microsoft

- Supports web, desktop, cloud, and microservices

- CLI-friendly and fast performance

## What is a Solution in .NET?

- A container for one or more related projects

- Managed by `.sln` file

- Supports organization and modularity