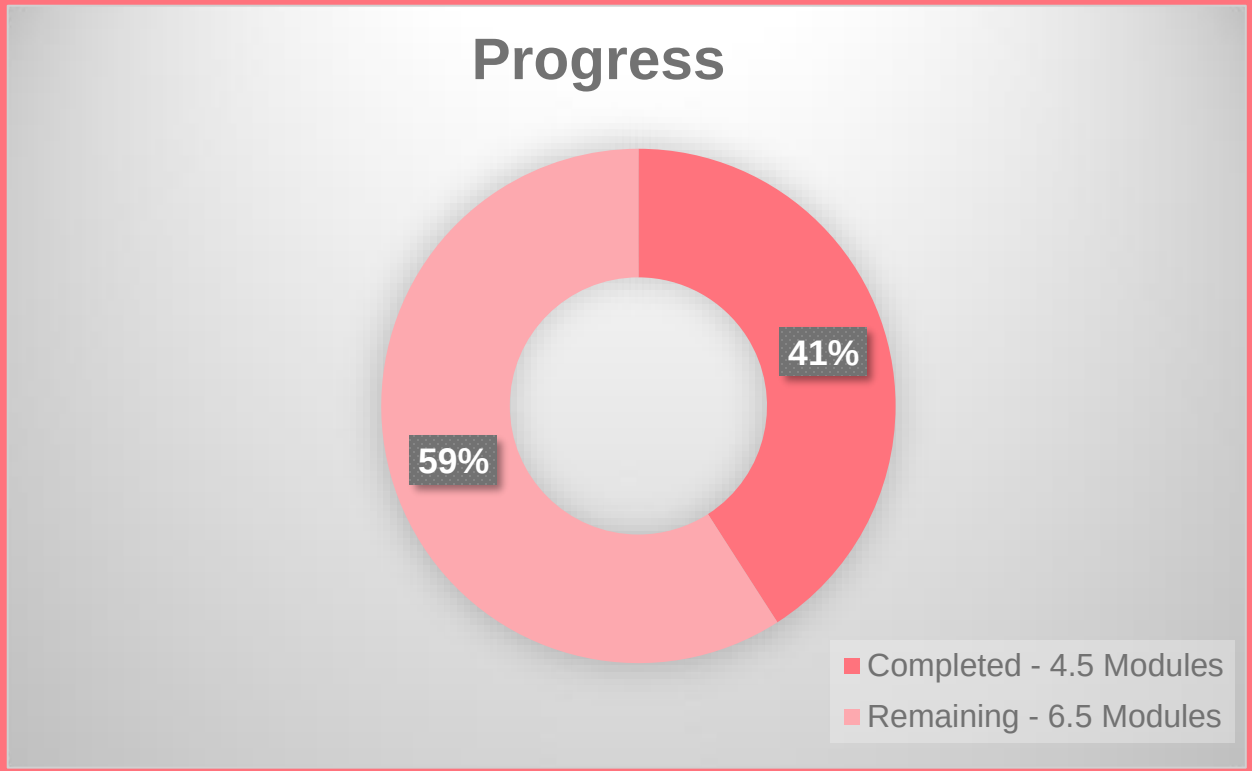
.NET Core Training

C# Fundamentals

Week 1: 27th Jan – 1st Feb

AGENDA

1. Progress
2. Learnings from the course
3. Demo


Progress
41%
59%
Completed - 4.5 Modules
Remaining - 6.5 Modules

Learnings from the Course

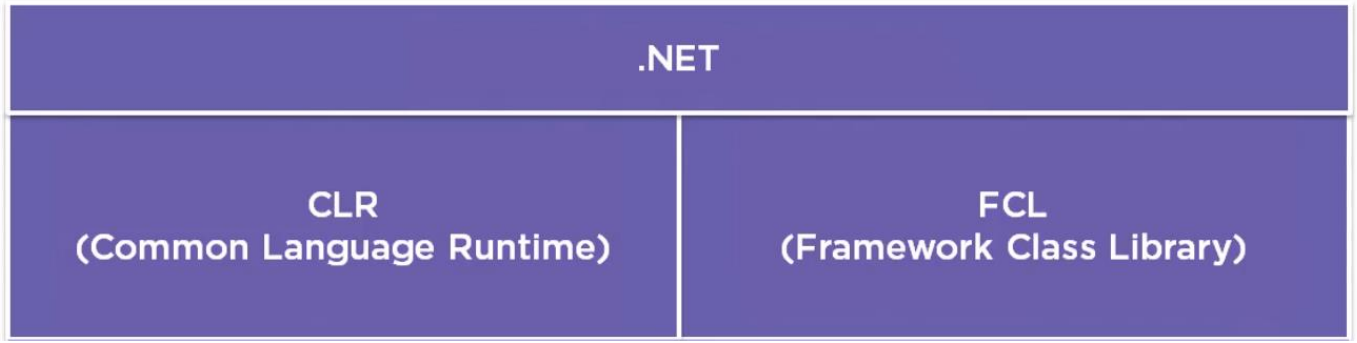
- Introduction
- C# Syntax
- Classes and Objects
- Testing

Introduction

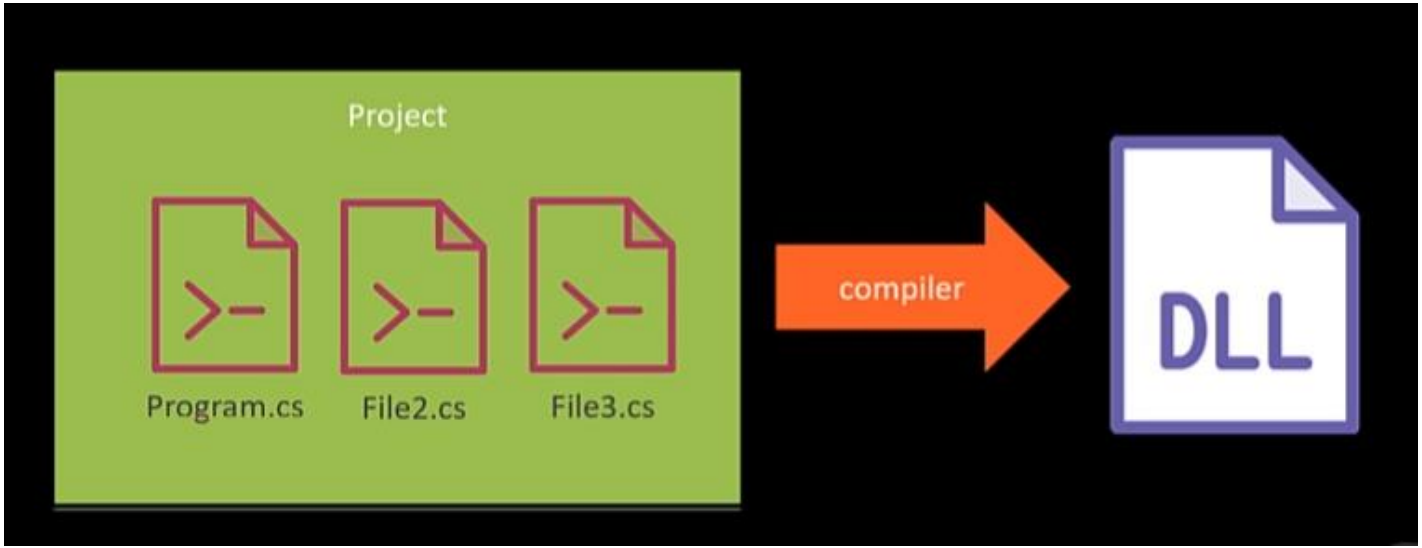
- .NET vs .NET Core
- .NET Runtime and Framework
- .NET CLI - dotnet, dotnet new(templates)

  dotnet build
- First C# Program
- Debugging

.NET Runtime and Framework



DOTNET BUILD



First C# Program

```
using System;

namespace consoleproject
{
  class Program
  {
    static void Main(string[] args)
    {
      Console.WriteLine("Hello World!");
    }
  }
}
```

Result :

```
Hello World!
```

C# Syntax

a) Declaring (Creating) Variables & assigning values:

type variableName = value;

b) Implicit type casting using var :

*var **name** = “Hello World";*

c) Explicit type casting :

string greeting = "Hello World";
Int x = 27;

C# Syntax

d) Declaring , Initializing and assigning values to an Array :

Datatype[ ] arrayName; // array declaration

double[ ] balance = new double[10]; // array initialization

int [ ] marks = new int[ ] { 99, 98, 92, 97, 95}; //assigning value to an array

e) Looping in Array (foreach):

```
foreach (type variableName in arrayName)
 {
   // Code block
}
```

C# Syntax

g) Assignment Operators

Operator	Example	Same As
=	x = 5	x = 5
+=	x += 3	x = x + 3
-=	x -= 3	x = x - 3
*=	x *= 3	x = x * 3
/=	x /= 3	x = x / 3
%=	x %= 3	x = x % 3

h) List

List<datatype> ListName = new List<datatype>();

Classes and Objects

Class:

A Class is a "blueprint" for creating objects.

Syntax:

```
class className
{
datatype name = value;
}
```

Object :

An object is basically a block of memory that has been configured according to the blueprint.

Syntax:

```
class ClassName
{
static void Main(string[] args)
{
ClassName ObjectName = new ClassName();  // object
}
}
```

Classes and Objects

Constructor :

public ConstructorName()
{

}

Access Modifiers :

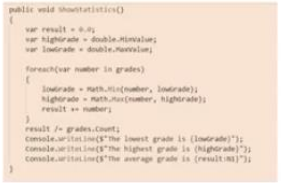
- *Public*
- *Protected*
- *Private*

Testing

Unit Testing

Verify

Investigate



Small Units of Code

Test Runner

Automation

xUnit.net

DEMO

THANKYOU!