What's New in C# 6

Introduction

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A Brief History of C#

C# 1.0 2002	Hello, World!
C# 2.0 2005	Generic<T>
C# 3.0 2007	cs => cs.Linq
C# 4.0 2010	dynamic
C# 5.0 2012	async

Feature Tour

```csharp
public class User
{
    // auto property initializer
    public Guid Id { get; } = Guid.NewGuid();
}
```

Feature Tour

```csharp
public struct Money(string currency, decimal amount)
{
    public string Currency { get; } = currency;
    public decimal Amount { get; } = amount;
}
```

Feature Tour

```csharp
using System.Console;

class Program
{
    public static void Main()
    {
        WriteLine("Hello World!");
    }
}
```

Feature Tour

```csharp
Dictionary<string, User> _defaultUsers
    = new Dictionary<string, User>()
{
    ["admin"] = new User("admin"),
    ["guest"] = new User("guest")
};
```

Feature Tour

```
public class Digits
{
    public byte Code { get; } = 0b1100;
    public long Length { get; } = 1_000_000_000;
}
```
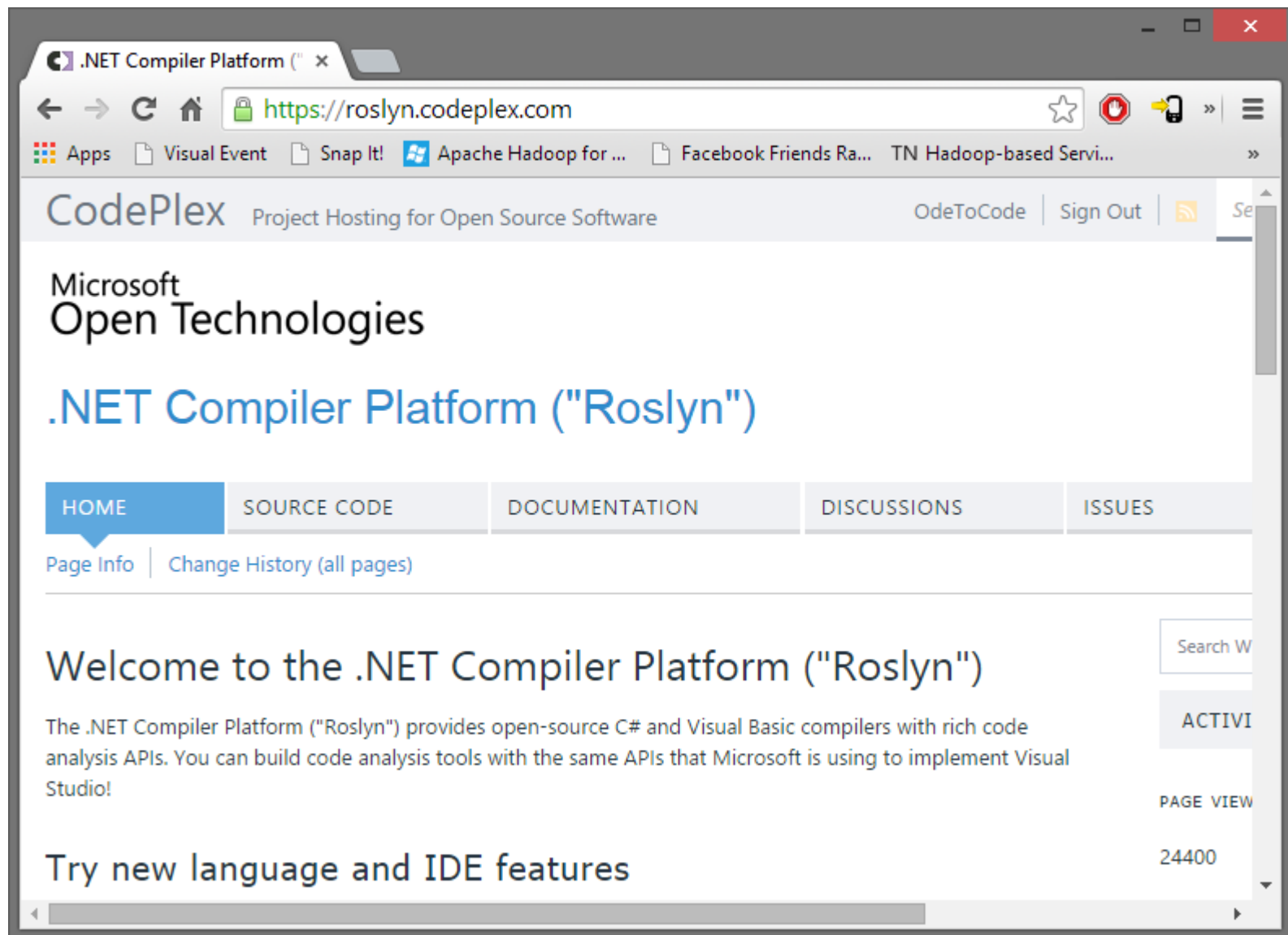
Feature Tour

```csharp
int result = 0;
foreach (var n in var odd = numbers.Where(n => n % 2 == 1).ToList())
{
    result += n + odd.Count();
}
return result;
```

Feature Tour

```csharp
var name = operation ?.Method ?.Name ?? "no name";

try
{
    operation();
    await _logWriter.WriteAsync(name + " executed");
}
catch (Exception ex) if (ex.Message != null)
{
    await _logWriter.WriteAsync(name + " failed");
}
finally
{
    await _logWriter.FlushAsync();
}
```

Roslyn

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C# 6.0
STARTING NOW!!