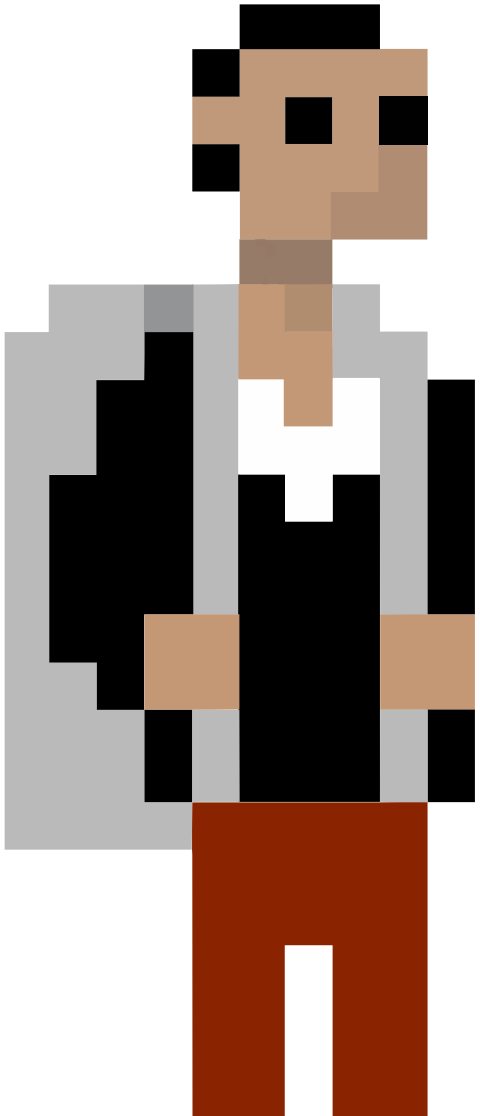
Motz Codes Live

@JamesMontemagno
motzcod.es

C# 6: Clean Up Your Code!
October 9th, 2015

Who is Motz?



James
Montemagno
Developer Evangelist, Xamarin

james@xamarin.com motzcod.es @JamesMontemagno

C# 6.0 => Clean up your code

July 2015

- Auto-property Enhancements
- Expression-Bodied Members
- Null Propagator
- String Interpolation
- MORE!
  - Await in catch/finally
  - Exception Filters
  - nameof Operator
  - Dictionary Initializer
  - Import Static Type

.NET 4.6
VS 2015
Xamarin Studio

C# 6.0 => Monkeys

```
public class Monkey
{
    public Monkey() { }
    public Monkey(int id, string name, string location)
    {
        Id = id;  Name = name; Location = location;
    }

    public int Id { get; private set; }
    public string Name { get; set; }
    public string Location { get; set; }

    public DayOfWeek MostActiveDay
    {
        get { return Id == 0 ? DayOfWeek.Friday : DayOfWeek.Monday; }
    }
    public void Print()
    {
        Console.WriteLine("We printed some stuff");
    }
    public string DisplayName
    {
        get
        {
            return string.Format("Monkey {0} lives in {1} with Id of {2}",
                                 Name, Location, Id);
        }
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Auto properties

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Initializers

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{
    public Monkey() { }
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        Id = id;  Name = name; Location = location;
    }

    public int Id { get; } = 0;
    public string Name { get; } = "Sofia";
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Using static

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Using static

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using static System.DayOfWeek;
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Expression -bodied functions!

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String Interpolation

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            return $"Monkey {Name} lives in {Location} with Id of " +
                "{(Id == 0 ? \"Bananas\" : Id)}";
        }
    }
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        $"Monkey {Name} lives in {Location} with Id of " +
                "{(Id == 0 ? \"Bananas\" : Id)}";
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```

?

Null-Conditional Operators

```
var length = 0;
if(customers != null)
  length = customers.Length;
```

```
Customer first = null
if(length >0)
  first = customers[0];
```

```
int? length = customers?.Length;
// null if customers is null
```

```
Customer first = customers?[0];
// null if customers is null
```

```
int length = customers?.Length ?? 0;
```

If null then null, if not then dot

Some more cool stuff

Await in catch & finally blocks

```
Resource res = null;
try
{
    res = await Resource.OpenAsync(...); // You could do this. ...
}
catch(ResourceException e)
{
    await Resource.LogAsync(res, e); // Now you can do this ...
}
finally
{
     if (res != null)
        await res.CloseAsync(); // ... and this.
}
```

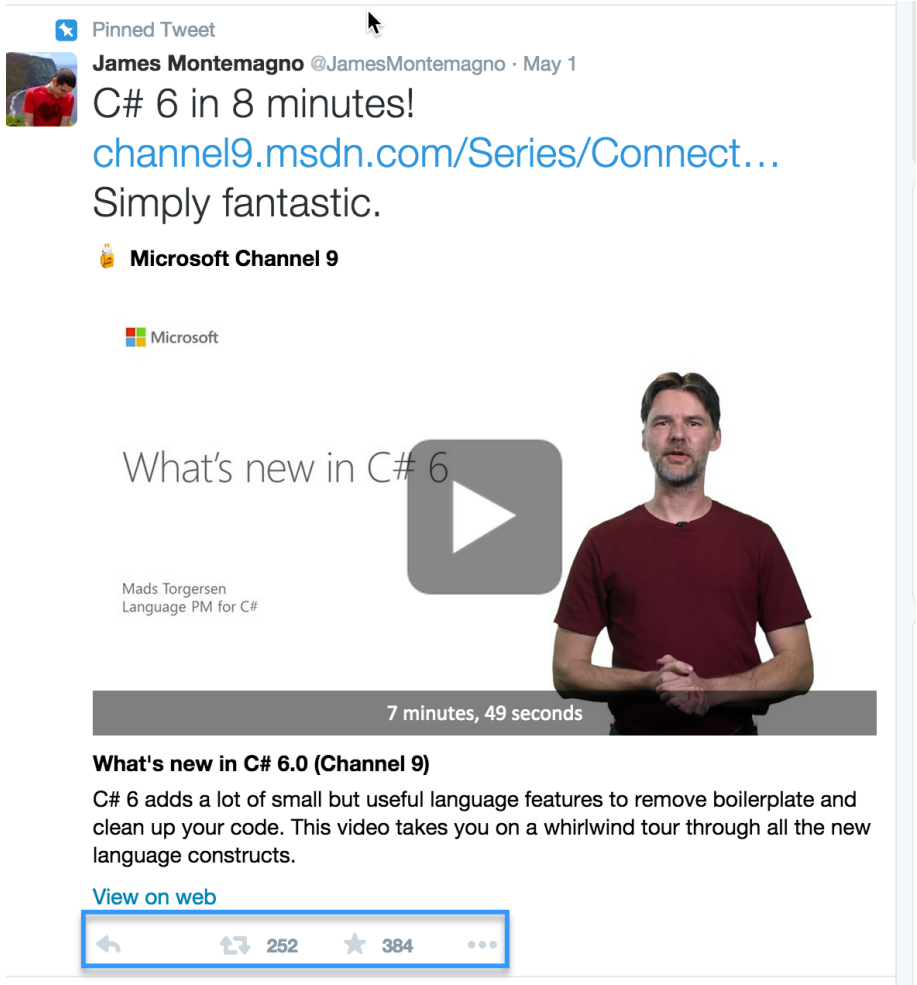
nameof expressions

```
public static void GetMonkey(int count)
 {
    if(count < 0)
        throw new ArgumentNullException("count");

    var monkeys = GetMonkeys();
    WriteLine("Name: " + monkeys[0].Name);
    // prints "Name Sofia"
}
```

nameof expressions

```
public static void GetMonkey(int count)
 {
    if(count < 0)
        throw new ArgumentNullException(nameof(count));

    var monkeys = GetMonkeys();
    WriteLine(nameof(monkeys[0].Name) + ": " + monkeys[0].Name);
    // prints "Name Sofia"
}
```

Resources



- Awesome Microsoft Docs
  - http://bit.ly/csharp6-features
- C# 6 Video with Mads:
  - https://channel9.msdn.com/Series/ConnectOn-Demand/211
- Motz Codes Live:
  - https://www.youtube.com/user/jamesmontemagno
  - https://github.com/jamesmontemagno/MotzCodesLive