



# IronRubying your C#

Tim Wingfield

Hockey, hockey, hockey,  
hockey...hockey all the  
time...



Thursday, July 22, 2010

Central OH  
Wendy  
Boys  
Kona  
Hockey  
local/regional speaker



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# Why ?

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expressive  
focus on testing  
rails

# Why ?



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# Why ?



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# Why ?



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expressive  
focus on testing  
rails

# Why IronRuby ?

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new-ish, 1.0 on April 12, 1.1 July 16  
rails  
use with existing .net code



# Why IronRuby ?



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# Why IronRuby ?



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new-ish, 1.0 on April 12, 1.1 July 16

rails

use with existing .net code



# What is?



IronRuby



1.8.6



# IronRuby



Dynamic Language Runtime



Common Language Runtime

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other DLR languages

IronPython

F#



Download - IronRuby

ironruby - Release: 1.0

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Apr 12 2010, Stable

★★★★★

1.0 RC4

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★★★★★

1.0 RC3

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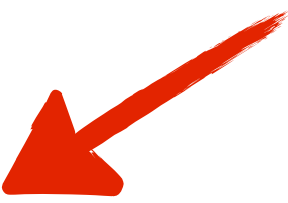
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start: IronRuby.net



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US ARMY

jetzt mieten!

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prepend an i => igem, iirb, ir instead of ruby  
performance not awesome  
rails/sinatra need rack for IIS  
C extensions (bson in mongo)  
no need to get to the CLR, don't use it

<code>

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first bit of code  
loading datetime  
loading monopoly object  
monkey patch something





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essence v. ceremony (neal ford)  
Raiders of the Lost Ark  
zero based arrays?  
c#/kpl example w/Brendan



<nunit v. rspec>

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start with mocking the long way

```
public class When_verifying_the_nunit_environment
{
    Player p;
    [SetUp]
    public void Because()
    {
        p = new Player();
    }

    [Test]
    public void then_the_player_should_not_be_null()
    {
        Assert.That(p, Is.Not.Null);
    }
}
```

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nunit

note ceremony

14 lines

```
describe 'when verifying the environment' do
  before :each do
    @p = Player.new
  end

  it 'should create a CLR object from the Monopoly project' do
    @p.should_not be_nil
  end
end
```

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rspec  
note essence  
8 lines

<integer assertion>



<integer assertion>

```
Assert.That(_player.AccountBalance, Is.EqualTo(125));
```

<integer assertion>

**Assert**.That(\_player.AccountBalance, **Is**.EqualTo(125));

@player.account\_balance.**should** be(125)

<string assertion>

<string assertion>

```
Assert.That(_message, Is.EqualTo("Payment successful"));
```



<string assertion>

```
Assert.That(_message, Is.EqualTo("Payment successful"));
```

```
@message.should == "Payment successful"
```

<mocks>

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start with mocking the long way

```
public class MockRepository : IBankRepository
{
    public bool PutMoneyInTheBankWasCalled { get; set; }

    public void PutMoneyInTheBank(int amount)
    {
        this.PutMoneyInTheBankWasCalled = true;
    }

    public bool TakeMoneyFromTheBank(int amount)
    {
        return amount < 500;
    }

    public int CheckFundsAvailable()
    {
        throw new NotImplementedException();
    }
}
```

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Typical hand rolled mock  
Note "Not Implemented"



```
class MockRepository
  include Monopoly::IBankRepository

  attr_accessor :put_money_in_the_bank_was_called

  def take_money_from_the_bank(amount)
    amount < 500
  end

  def put_money_in_the_bank(amount)
    @put_money_in_the_bank_was_called = true
  end
end
```

```
private Player _player;  
private BankerService _service;  
private MockRepository _repo;
```

```
[SetUp]
```

```
public void before_each()
```

```
{
```

```
    _player = new Player { AccountBalance = 875 };
```

```
    _repo = new MockRepository();
```

```
    _service = new BankerService(_repo);
```

```
}
```

```
before :each do
  @player = Player.new
  @player.account_balance = 875

  @repo = MockRepository.new
  @service = BankerService.new @repo
end
```

<mocks v2>



```
private Player _player;  
private BankerService _service;  
private Mock<IBankRepository> _mock;
```

[SetUp]

```
public void before_each()  
{  
    _player = new Player { AccountBalance = 875 };  
    _mock = new Mock<IBankRepository>();  
    _mock.Setup(m => m.TakeMoneyFromTheBank(550)).Returns(false);  
    _mock.Setup(m => m.TakeMoneyFromTheBank(It.IsAny<int>()))  
        .Returns(true);  
  
    _service = new BankerService(_mock.Object);  
}
```

```
before :each do
```

```
  @player = Player.new
```

```
  @player.account_balance = 875
```

```
  @isolation = Isolation.for IBankRepository
```

```
  @isolation.when_receiving(:take_money_from_the_bank).return(true)
```

```
  @isolation.when_receiving(:take_money_from_the_bank)  
    .with(550).return(false)
```

```
  @service = BankerService.new @isolation
```

```
end
```

<mock verification>

<mock verification>

```
_mock.Verify(m => m.PutMoneyInTheBank(It.IsAny<int>()),  
Times.AtLeastOnce());
```



<mock verification>

```
_mock.Verify(m => m.PutMoneyInTheBank(It.IsAny<int>()),  
Times.AtLeastOnce());
```

```
@isolation.did_receive?(:put_money_in_the_bank).with(50)
```

<rspec stubs>

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rspec stub

```
<rspec stubs>
```

```
class StubbedRepo  
  include Monopoly::IPropertyRepository  
end
```

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rspec stub

```
<rspec stubs>
```

```
class StubbedRepo  
  include Monopoly::IPropertyRepository  
end
```

```
@repo = StubbedRepo.new  
@repo.stub!(:get_all_properties).and_return(@all_properties)
```





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use older version of Cucumber (0.6.4)  
not cuke for nuke



IronRuby on



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Why?

<code>

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ride the rails

Tim Wingfield

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@timwingfield

github.com/timwingfield/TestingSeaPound