



IronRubying your C#

Tim Wingfield

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



Wednesday, July 28, 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 IronRuby ?

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

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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 - IronRubyironruby - Release: 1.0

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Dev status:

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Released | [Planned](#)

★ 1.0

Apr 12 2010, Stable

★★★★★

1.0 RC4

Mar 23 2010, Stable

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CTP for .NET 4.0 RC

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start: IronRuby.net

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DU SECTEUR AMÉRICAIN
SIE VERLASSEN DEN AMERIKANISCHEN SEKTOR**
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>

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caricature v. moq

```
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
```

```
<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

<peek at cucumber>

<peek at cucumber>

Scenario: Checking my environment

Given the player "Car" is initialized to start a game

When I check the player balance

Then the account balance should be \$"2000"

<peek at cucumber>

Scenario: Checking my environment

Given the player "Car" is initialized to start a game

When I check the player balance

Then the account balance should be "\$2000"

```
Given /^the player "([\^"]*)" is initialized to start a game$/ do |player_name|  
  @player = Player.new  
  @player.name = player_name  
end
```

```
When /^I check the player balance$/ do  
  @balance = @player.account_balance  
end
```

```
Then /^the account balance should be "([\^"]*)"$/ do |balance|  
  @balance.should be(balance)  
end
```



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