

### Links

NuGet	<a href="https://www.nuget.org/packages/Moq/">https://www.nuget.org/packages/Moq/</a>
Github	<a href="https://github.com/moq/moq4">https://github.com/moq/moq4</a>

### Normal Mock, Setup, Verify

```
//Arrange
//Creating a Mock
var mockRepository = new Mock<I Invoice Repository>();
//Perform method setup
mockRepository.Setup(o => o.Save(It.IsAny<Invoice>())) .Returns(true);
//Pass in the mock with the Object property
var invoiceService = new InvoiceService(mockRepository.Object);
//Act
InvoiceService.Create(new Invoice());
//Assert
mockRepository.VerifyAll();
```

### Verify the parameters for a call

```
//Arrange
var mockCalculator = new Mock<I Calculator>();
Invoice invoice = new Invoice();
mockCalculator.Setup(o => o.Calculate(It.IsAny<string>(), It.IsAny<decimal>()
)).Returns(5.95M);
//Act
mockCalculator.Calculate(invoice.ZipCode, invoice.Weight);
//Assert
mockCalculator.Verify(x => x.Calculate(
It.IsAny<string>(f n=> fn.Equals(invoice.ZipCode, StringComparison.IgnoreCase)),
It.IsAny<decimal>(f n=> fn.Equals(invoice.Weight))));
```

### Stubbing Properties

```
//Stub property
mockRepository.SetupProperty(o => o.ConnectionString, "Test");
//Stub multiple properties
mockRepository.SetupAllProperties();
mockRepository.Object.ConnectionString = "Test";
```

### Verify Times a Method was Called

```
mockInvoiceRepository.Verify(x=>x.Save(It.IsAny<Invoice>()), Times.Once());
```

### Verify Getter Was Called

```
mockRepository.VerifyGet(x=>x.ConnectionString);
```



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### Verify Setter Was Called

```
mockRepository.VerifySet(x=>x.ConnectionString = It.IsAny<string>());
```

### Throwing Exceptions

```
mockRepository.Setup(x => x.Save(It.IsAny<Invoice>())) .Throws<ChangedByAnotherUserException>();
```

### Mock Events

```
mockRepository.Raise(x=>x.NotifySalesTeam += null, new NotifySalesTeamEventArgs("jim"));
```



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