1. **Unit Testing**

**Unit Test**

1. **namespace** WebAPI.Tests
2. {
3. **using** Microsoft.VisualStudio.TestTools.UnitTesting;
4. **using** System.Net.Http;
5. **using** System.Web.Http;
6. **using** WebAPI.Controllers;
7. **using** WebAPI.Models;
8. [TestClass]
9. publicclassEmployeeUnitTest
10. {
11. [TestMethod]
12. publicvoid EmployeeGetById()
13. {
14. // Set up Prerequisites
15. var controller = new EmployeeController();
16. controller.Request = new HttpRequestMessage();
17. controller.Configuration = new HttpConfiguration();
18. // Act on Test
19. var response = controller.Get(1);
20. // Assert the result
21. Employee employee;
22. Assert.IsTrue(response.TryGetContentValue < Employee > (**out** employee));
23. Assert.AreEqual("Jignesh", employee.Name);
24. }
25. }
26. }

**OKNegotiatedContentResult<T> - for HttpAction result**

1. var response = controller.Get(1);
2. var contentResult = response as OkNegotiatedContentResult<Department>;
3. // Assert the result
4. Assert.IsNotNull(contentResult);
5. Assert.IsNotNull(contentResult.Content);
6. Assert.AreEqual(1, contentResult.Content.DepartmentId);
7. Assert.AreEqual("DefaultApi", createdResult.RouteName);
8. Assert.IsNotNull(createdResult.RouteValues["id"]);

Assert.AreEqual(HttpStatusCode.Accepted, contentResult.StatusCode);

**NUnit testing: MOK framework**

using MVC5\_Testing\_1.ModelAccess;

using NUnit.Framework;

namespace MVCModelTest

{

    [TestFixture]

    public class CheckDepartmentTest

    {

        [Test]

        public void CheckDepartmentExist()

        {

            var obj = new DepartmentAccess();

            var Res = obj.CheckDeptExist(10);

            Assert.That(Res, Is.True);

        }

    }

}

[Test]

public void CheckDepartmentExistWithMoq()

{

    //Create Fake Object

    var fakeObject = new Mock<IDepartmentAccess>();

    //Set the Mock Configuration

    //The CheckDeptExist() method is call is set with the Integer parameter type

    //The Configuration also defines the Return type from the method

    fakeObject.Setup(x => x.CheckDeptExist(It.IsAny<int>())).Returns(true);

    //Call the methid

    var Res = fakeObject.Object.CheckDeptExist(10);

    Assert.That(Res,Is.True);

}