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UNIT TESTING

Unit testing is the process of testing individual units of code for errors and functionality. A unit is the smallest piece of logical functional work that can be tested in isolation. A unit test is a piece of code written to test a unit for its intended purpose. This may involve testing a single method, class, or group of classes to test a single result.

Each individual unit must meet strict requirements set forth by the unit test. Only the intended behavior of the unit is tested in isolation from the application and all other units. The testing will identify any errors in the one’s algorithm or logic. This ensures that each piece of the application functions correctly. It also narrows down any potential errors to the source. Tests are usually developed in tandem with the unit; especially in agile development. With each sprint, one will want to verify the quality of work.

Visual Studio provides a single interface test explorer tool to assist in the development, management, and execution of unit tests. Several different frameworks are available to use within test explorer. To start a unit test, add a new project to your solution and select unit test project. This will auto generate a test class where one can write each test method prefixed with a [TestMethod] attribute. Next, on the top ribbon in Visual Studio select test, and then run unit tests, all tests in the drop down menu. This will execute all of the test methods against the code. When complete, Test Explorer will open and displays a summary of the results.