

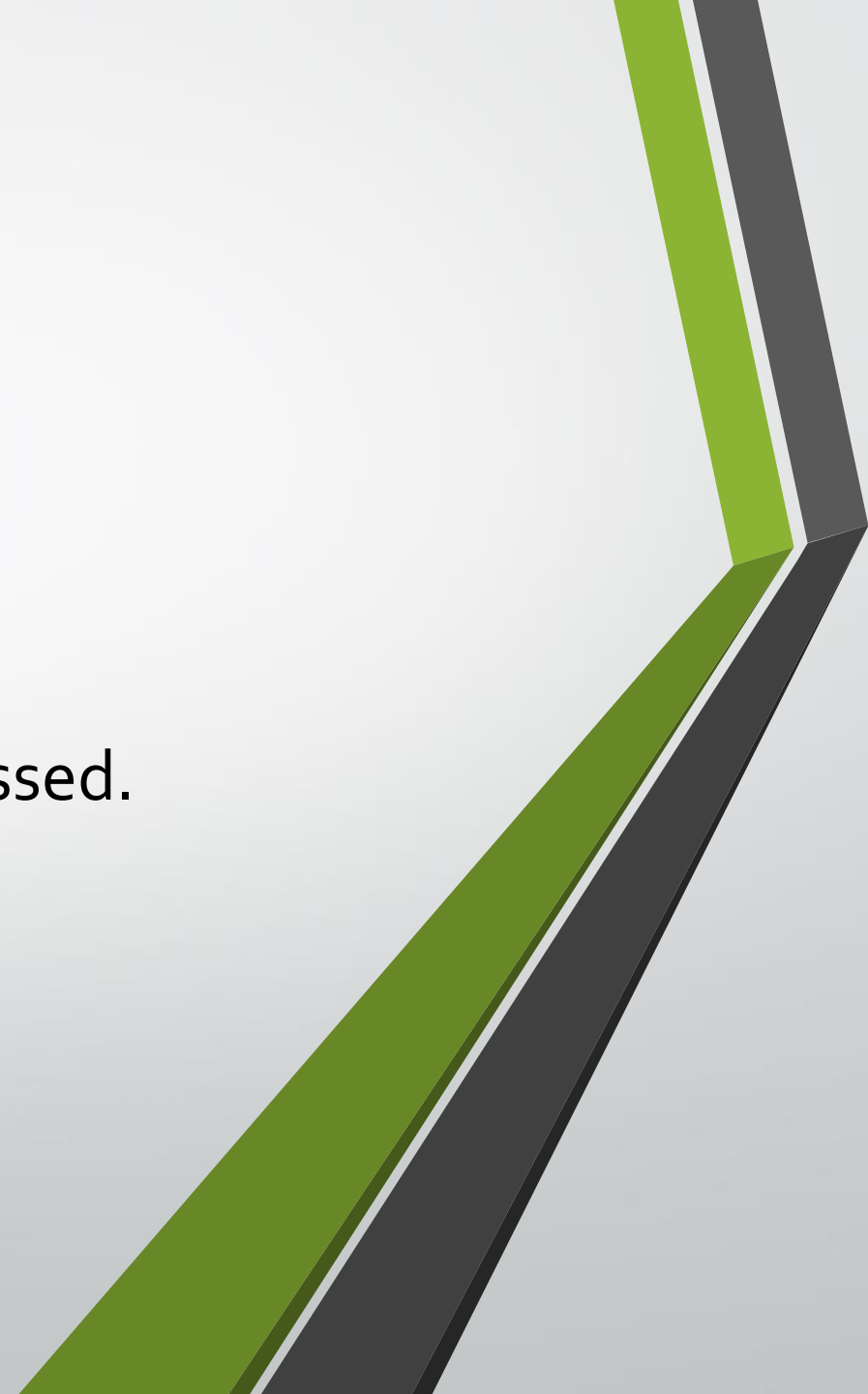
Data Driven Testing



What is DDT?

- In Data Driven Testing, the data required by the script, which also called as "***Test Data***" is stored external file system.
- During the runtime , the test data is loaded from external file system and supplied to the test script.
- Data can be stored in XML,CSV , Database and Excel files
- MSTest frame work provide the attribute "***DataSource***" by which, one can easily access the data


Data Source

- ***ProviderInvariantName*** :- Name of the provider
 - ***ConnectionString*** :- Location of the external file
 - ***TableName*** :- Name of the data Table
 - ***AccessMethod*** :- Order in which data will be accessed.
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Reading the Data from CSV

- ***ProviderInvariantName*** :- Microsoft.VisualStudio.TestTools.DataSource.CSV
- ***ConnectionString*** :- <Location of file>
- ***TableName*** :- Name of file#CSV
- ***AccessMethod*** :- Sequential or Random

Reading the Data from XML

- ***ProviderInvariantName*** :- Microsoft.VisualStudio.TestTools.DataSource.XML
 - ***ConnectionString*** :- <Location of file>
 - ***TableName*** :- <TagName>
 - ***AccessMethod*** :- Sequential or Random
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Reading the Data from Excel

- ***ProviderInvariantName*** :- System.Data.Odbc
- ***ConnectionString*** :- Dsn=Excel Files;dbq=<ExcelFileLocation>;
- ***TableName*** :- Sheet Names\$
- ***AccessMethod*** :- Sequential or Random

Excel Data Reader

- Its an utility which is use for reading the data from excel file
- For using it, first we need to install its package in the project
- For installing the package we will use "***NuGet***"

Steps to use ExcelDataReader

- **Step 1:-** Create the object of "***FileStream***" which will point to the excel file
- **Step 2:-** Open the excel file using "***ExcelReaderFactory***". Excel Data reader consider sheets in the form of table
- **Step 3:-** Use "***AsDataSet().Tables[<sheetName>]***" method, which will return the data in form of table
- **Step 4:-** Use "***Rows[rowIndex][colIndex]***" to read the cell pointed by the index.

Framework method for Excel

- Method for reading the data from excel file. Following are the argument it will take
 - *Excel Path*
 - *Sheet Name*
 - *Row*
 - *Column*
- Also we will use the cache concept as the opening excel file is costly operation.
- We are going to use "*Dictionary*" data structure. Which store the data inform of "*Key-Value*" pair

Framework method for Excel

- For cache following is the logic
 - 1. Before creating the object, I will check in cache*
 - 2. If it is there use that one*
 - 3. Otherwise create the new object*
 - 4. And add it to cache for further use.*
 - 5. "SheetName" will act as Key for us.*