

Data Validation

Intro

Define and apply data validation rules to cells with ExcelApplication.

Excel Data Validation (in Excel the menu, Data > Validation...) allows you to control what kind of data can be entered into cells by creating validation rules. You can define and apply these rules with ExcelApplication.

Code

```
public class DataValidationDemo
{
    // Declare an ExcelApplication object, workbook and a worksheet. The document
    created
    will only have one worksheet.
    private ExcelApplication xlw;
    private Workbook wb;
    private Worksheet ws;
    // Previously selected by user in a webform
    private string borrowerName = "Sample J. Borrower";
    private string loanStartDate = "6/19/2013";
    private int Downpayment = 20;
    private double InterestRate = .05;
    private int PurchasePrice = 200000;
    private int LoanPeriod = 15;

    ///
    /// Build the report with ExcelApplication
    ///
    public void GenerateReport()
    {
        // Get path to template.
        //string templatePath = "Templates/FirstYearPayment.xlsx";

        // Create an instance of ExcelApplication,
        open the correct Workbook template based on loan period,
        and create one Worksheet.
        xlw = new ExcelApplication();
        wb = xlw.Open(@"..\..\ExcelTemplateFiles\FirstYearPayment.xlsx");
        ws = wb.Worksheets[0];

        // Insert some data into the template
        ws.Name = borrowerName;
        ws["A2"].Value = "Prepared for " + borrowerName;
        ws["A3"].Value = "Generated on " +
        System.DateTime.Now.ToShortDateString();
        ws["C5"].Value = Convert.ToInt32(PurchasePrice);
        ws["C6"].Value = Convert.ToInt32(Downpayment) //.01;
        ws["C10"].Value = Convert.ToDouble(InterestRate);
        ws["C11"].Value = loanStartDate;
        ws["C9"].Value = Convert.ToInt32(LoanPeriod) //12;

        // Add data validation.
```

```

        //Define the type of validation you want (in this case, List),
        //and specify the valid values in an array.

        int[] purchasePriceValues = { 200000, 250000, 300000, 350000, 400000 };
        SoftArtisans.OfficeWriter.ExcelWriter.DataValidation dvPurchasePrice =

wb.CreateDataValidation(SoftArtisans.OfficeWriter.ExcelWriter.DataValidation.ValidationType.List, purchasePriceValues);

        // After you define your data validation rule, apply it to a Cell,
        //Area, or Range

        ws["C5"].DataValidation = dvPurchasePrice;

        // Define data validation rules for percentages
        string[] downPaymentValues = { "20.00%", "25.00%", "30.00%", "35.00%",
"40.00%" };
        DataValidation dvDownpayment =
            wb.CreateDataValidation(DataValidation.ValidationType.List,
downPaymentValues);
        ws["C6"].DataValidation = dvDownpayment;

        string[] intRateValues = { "5.00%", "6.00%", "7.00%", "8.00%", "9.00%",
"10.00%" };
        DataValidation dvInterestRate =
            wb.CreateDataValidation(DataValidation.ValidationType.List,
intRateValues);
        ws["C10"].DataValidation = dvInterestRate;

        // Define a date-based comparison rule. The entered date must be on or
after
        //the current date.

        DataValidation dvFirstPayment =
            wb.CreateDataValidation(DataValidation.ValidationType.Date,
                DataValidation.ComparisonType.GreaterThanOrEqualTo,
System.DateTime.Now);

        ws["C11"].DataValidation = dvFirstPayment;

        // Save the report by streaming it
        to the client's browser
        xlw.Save(wb, @"..\..\ExcelOutputFiles\DataValidation_output.xlsx");

    }

```

```
}
```

Downloads

- Template: [FirstYearPayment.xlsx](#)
- Output: [DataValidation_output.xlsx](#)