

Laboratórios de Desenvolvimento de Software - LEI

Reports

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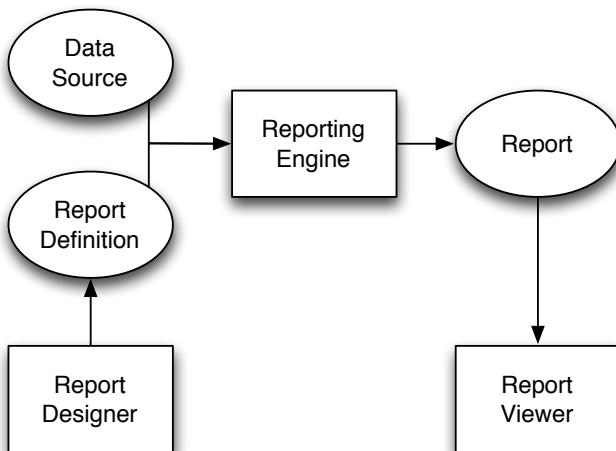
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Reporting Services

- Gathering and presenting information in a useful manner is a key feature in business;
- This is done in the form of *reports*, which allow better formatting features, charts, ...
- Visual Studio contains built-in *Reporting Services*;
- The more advanced *Crystal Reports* are also available.

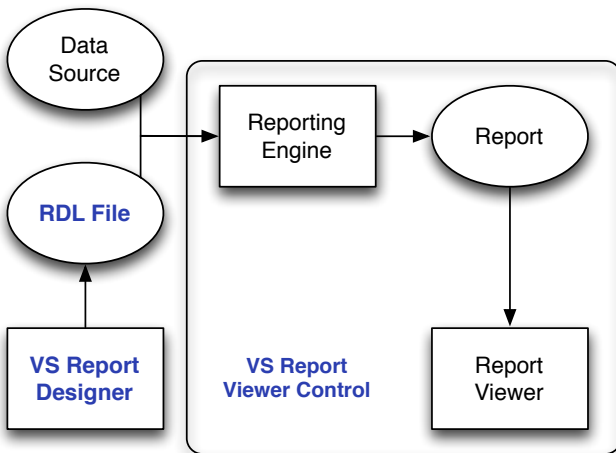
Reporting Services



Reporting Services

- *Report definition* files are specified in the *report designer*;
- The report definition, along with a *data source* is passed to the *report engine* that generates the actual *report*;
- The report is visualized in the *report viewer*.

Reporting Services



Designing Reports

- First step is to assign data sources to the report designer;
- Then reporting controls are created and bound to elements in the data source;
- Each control has an associated *expression*.

Designing Reports

- Text boxes;
- Tables;
- Matrices;
- Images;
- Charts;
- Subreports;
- ...

Rendering Reports

- The Report Viewer control is used to present reports in Windows Forms applications;
- Rendering the report consists on specifying the data to populate it:

```
LocalReport reportEngine = reportViewer.LocalReport;  
reportEngine.ReportPath = "ReportDef.rdlc";  
reportEngine.DataSources.Add(new ReportDataSource("AppData", data));  
reportViewer.RefreshReport();
```


Rendering Reports

- WPF does not have a report viewer control;
- However, every Windows Form control can be embedded in WPF using the `WindowsFormsHost` control.

Rendering Reports

- It can also be rendered as an external object, e.g. PDF:

```
byte[] reportOutput = reportEngine.Render("PDF");
```

Crystal Reports

- Visual Studio has also support for *Crystal Reports*, a third party reporting service;
- since VS 2010 it no longer ships natively (in favor of MS Reporting Services);
- Can still be installed as a plug-in.

Bibliography



N. Randolph, D. Gardner, M. Minutillo and C. Anderson
Professional Visual Studio 2010.
Wrox, 2010.