# SQL SERVER REPORTING SERVICE CHEAT SHEET

## SSRS BASICS

### SSRS

SQL Server Reporting Service is a feature included in the SQL server product. It is a server-based reporting platform used to create and manage a wide variety of reports and deliver them in a range of formats.

### Components of SSRS

• **Databases:** Reporting service uses two databases named ReportServer and ReportServerTempDB by default. The ReportServer database is used to store reports, data sources, snapshots etc. ReportServer TempDB is used for temporary storage, and these two services are automatically created while configuring reporting services.

• **Windows service:** The windows service is implemented as the core of Reporting services which provides the following functionalities
o HTTP listener is a new feature implemented in the Reporting Services where internet information service (IIS) is not required
o Report Manager is an ASP.NET application which provides a browser-based interface for managing the Reporting Services
o The web service is also implemented as ASP.NET application, which provides a programmatic interface for managing the reporting services
o Background processing is used to provide the core services for Reporting Services
o The Report Manager, Web Services and Background Processing are implemented as separate application domains

• **Report Designer:** It provides the capability t design, develop, test and deploy reports. It is a developer-centric tool called Business Intelligence Development Studio (BIDS).

### BI Development Studio

BIDS is a tool used to develop reports. It has some enhancements to the user-interface for designing, developing and testing reports included with SQL server.

### SQL Server Data Tools

SSDT is a Visual Studio based Microsoft application configured to use for MSBI line of products such as SSIS, SSRS and SSAS

### Report Def . Language

RDL: XML grammar
Report Definition Language for Client is an XML file that corresponds to (RDLC): RDLC is produced by the Visual Studio report definition that is (.rdlc) files in XML format to be used with ReportViewer control

### Data Sources & Set

Data sources holds the details of the database server Datasets stores the specific query that is used to fetch the data for a particular report. There are two types of Datasets
• **Shared Datasets:** It is a dataset published on a remote server and can be used by multiple reports
• **Embedded datasets:** These datasets are defined in and used by a single report

### Architecture of SSR

• **Report Builder:** It is a component used to drag and drop and provides easy use of Report Design functionality
• **Report Designer:** It is a publishing tool hosted in Business Intelligence Development Studio (BIDS) or visual studio which can used to develop simple and complex reports.
• **Report Manager:** Web-based reports can be easily accessed using this tool. The default URL is http://<server>/reports
• **Report server:** It is a server used to store metadata in a SQL server database engine
• **Report Server Database:** It is a database which is sued to store metadata, report definitions, resources, security settings, delivery data etc.
• **Data Sources:** It is used by Reporting Services to retrieve data from relational or multi-dimensional data sources

| Statement | Expression |
|---|---|
| Return first day of the current week | =DateAdd("d",-DatePart(DateInterval.WeekDay,Today,0,0)+1, Today) |
| Returns first day of the current month | =DateAdd("d",-(Day(today)-1), Today) or =DateSerial( year(today()), month(today()), 1) |
| Return first day of current year | =DateAdd("d",-DatePart(DateInterval.DayOfYear,Today,0,0)+1, Today) |
| Last day of current month | =dateadd("m",1,dateserial(year(Today),month (Today),0)) |
| Last day of previous month | =dateadd("m",0,dateserial(year(Today) month(Today),0)) |
| Last day of next month | =dateadd("m",2,dateserial(year(Today),month (Today),0)) |
| Return period over period | For week over week =DateAdd("ww",-1, Today) For month over month =DateAdd("m",-1,Today) For year over year =DateAdd("yyyy",-1, Today) |

| Statement | Expression |
|---|---|
| Return current month name | =MonthName(Month(Today())) |
| Uppercase fields | =UCASE(Fields!FieldName.Value) |
| Convert text to proper case | =StrConv(Fields!FieldName.Value, VbStrConv.ProperCase) |
| To replace null with another value | =iif(Fields!FieldName.Value = nothing, "No Value",Fields! FieldName.Value) |
| To alternate row color | =iif(RowNumber(Nothing) Mod 2 = 0, "Silver", "White") |
| Handling division by zero | =iif(Fields!DenominatorField.Value = 0, 0, Fields!NumeratorField.Value/ iif(Fields!DenominatorField.Value = 0, 1, Fields! DenominatorField.Value)) |
| Security number | =Replace(Fields!EmailAddress.Value,"-","") |

### Advantages of SSRS

• It provides direct and efficient reporting access for information residing in databases such as Oracle and MS SQL Server
• Faster production of reports on relational and cube data
• It is used to create an easy to deploy centralized reporting infrastructure based on Microsoft Reporting services
• It provides better decision support for faster delivery of information to the business
• It provides the ability for the business to self-serve, edit and interact with the information without relying om IT resources
• The entire report and the data source files are stored as an XML file which is used by the reporting engine to render the reports
• It contains a simple pricing model for both entry level and enterprise level installations allowing inexpensive provision of the BI tools

• XML based report definition allows to directly design the reports programmatically and render them
• The entire functionality is displayed as a single web service
• The role-based management for security is applied to folders as well as reports
• The reporting needs of the user can be managed by himself by accessing reports ad-hoc or by subscribing the reports
• The UI for the defined parameters is automatically generated