

# FACTFILE: GCE SOFTWARE SYSTEMS DEVELOPMENT

## Appendix 3

### </> Crystal Reports

There are two elements to consider:-

1. the display / print options within the report form,
2. to create layout of report with Crystal Report generator.

#### 1a Form to hold the CrystalReportViewer

- Place panel on form to hold viewer (optional - useful if a second panel is required to allow parameter values to be selected)
- Place CrystalReportViewer on panel

The following uses the wizard to extract the required information from the database but can be coded entirely in the form load event.

- Place SqlDataAdapter on form
- (choose new items to toolbox – filter for SQL and check the 4 SQL controls listed)
- Select new connection – **Example**, type in localhost/sqlexpress and refresh
- Select required database

(**Note:** SqlConnection is automatically generated)

Rename sqlDataAdapter  
Generate a new dataset

#### 1b Code behind the form to link the CrystalReportViewer to the CrystalReport layout

**Example 1: Simple report of Customers in alphabetical order (no parameter required)**

```
CryRptCustomers rpt = new CryRptCustomers();  
crystalReportViewer1.ReportSource = rpt;  
crystalReportViewer1.refreshReport();
```

where cryRptCustomers is name of Crystal report layout created with CrystalReport generator  
– See 2 on the next page.

### Example 2: Report with parameter whose value is set on the form (Ensure matching fields in SQL query for the form and the Crystal Report layout)

```
// Set up sql statement, sqlCommand and sqlDataAdapter as required
// daCustomerNames.SelectCommand.Parameters["@Name"].Value = initialLetter;

daCustomerNames.FillSchema(dsCustomerNames, SchemaType.Source);
daCustomerNames.Fill(dsCustomerNames, "CustomerNames");

CrystalReport1 rpt = new CrystalReport1();
rpt.SetDataSource(dsCustomerNames.Tables["CustomerNames"]);

crystalReportViewer1.ReportSource = rpt;
crystalReportViewer1.RefreshReport();
```

## 2 CrystalReport – Design Layout

Right click on project and add new item

- Choose Reporting - CrystalReport and name report (example - [CryRptCustomers](#))
- Wizard opens to select data
  - o Standard
  - o Choose localhost
  - o **OR** selectCreate new connection
    - Ole DB ADO - Provider ole DB Provider for sql server
    - Type in localhost\sqlexpress
    - Check integrated security
    - Select required database
    - Continue to select fields / grouping / summations

**Note** - Right click on the report for access to the different **components**

E.g. use the **database** to make changes to the sql statement (show sql statement)

In the Crystal report you can use the **Field Explorer** to edit:

**Database Fields:** to insert and delete fields from report,

**Special fields:** to insert Page 1 of N

**Running Total fields:** add totals, averages etc. for fields

**Formula fields:** works on strings, numbers, dates etc.

- format fields,
- concatenate fields,
- apply functions to fields,

Right click on a control or multiple controls to format – font, display.

### Example of database SQL Select Query set up through wizard

SELECT Customers.CustomerNo, Customers.Title, Customers.CustomerForename, Customers.

CustomerSurname, Customers.Address1, Customers.Address2, Customers.Address3, Customers.PostCode,

Customers.TelNo

FROM SampleDatabase.dbo.Customers

ORDER BY Customers.CustomerSurname, Customers.CustomerForename

