

Software Engineering Lab

Crystal Reports – Part1

Lab 5

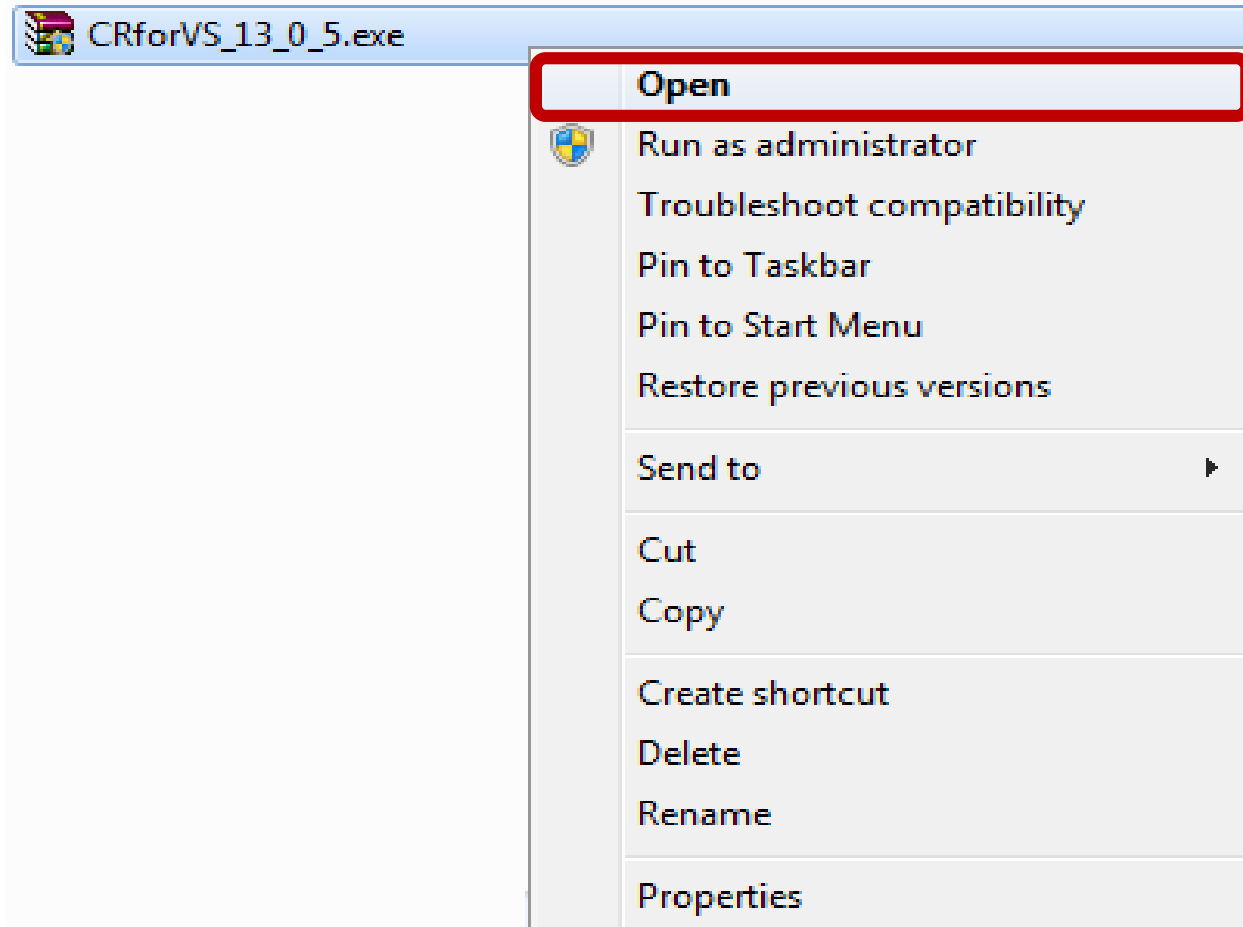
Agenda

- ❑ Introduction to Crystal Reports
- ❑ Crystal Reports Installation
- ❑ Crystal Reports Creation
- ❑ Calling Crystal Reports From C# Form

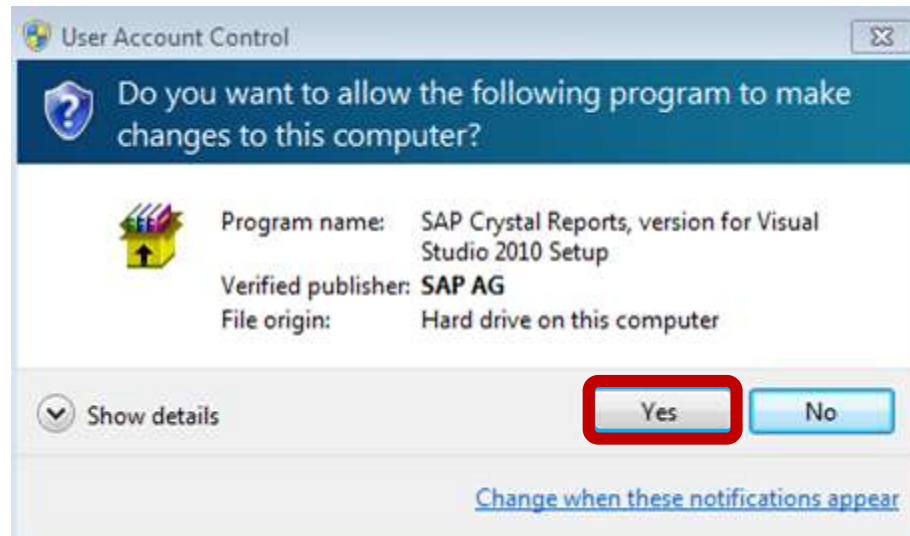
Introduction to Crystal Reports

- ❑ Crystal Report is a database reporting application used by many different types of businesses to generate accurate and powerful reports that assist in business decision making.
- ❑ It can access and analyze different types of data sources as Oracle, Microsoft SQL Server, etc.

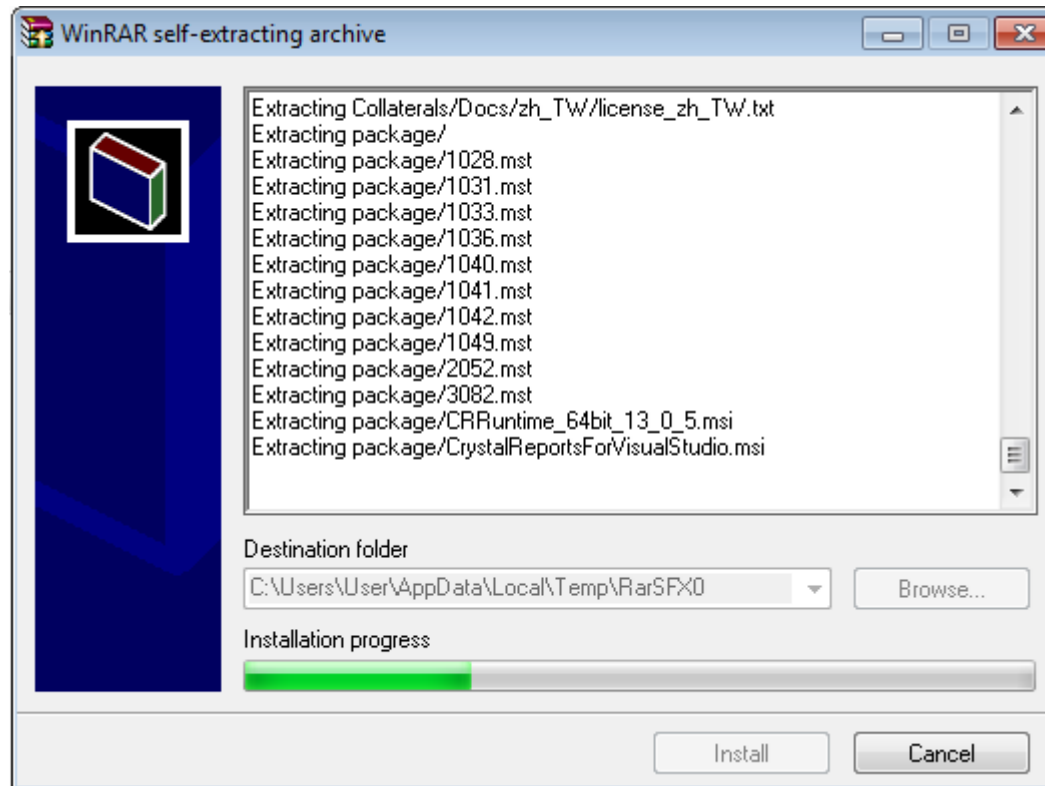
Crystal Reports Installation



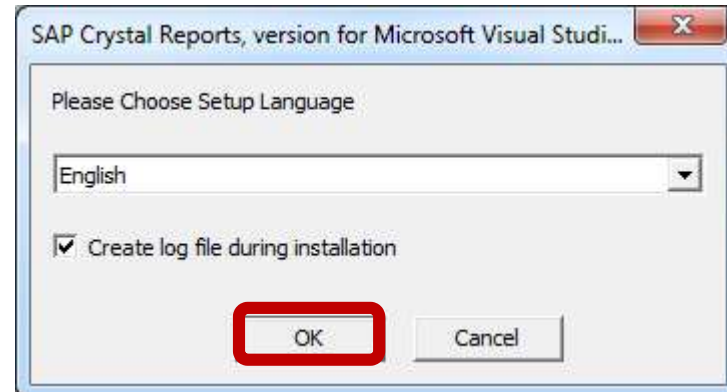
Crystal Reports Installation(cont'd)



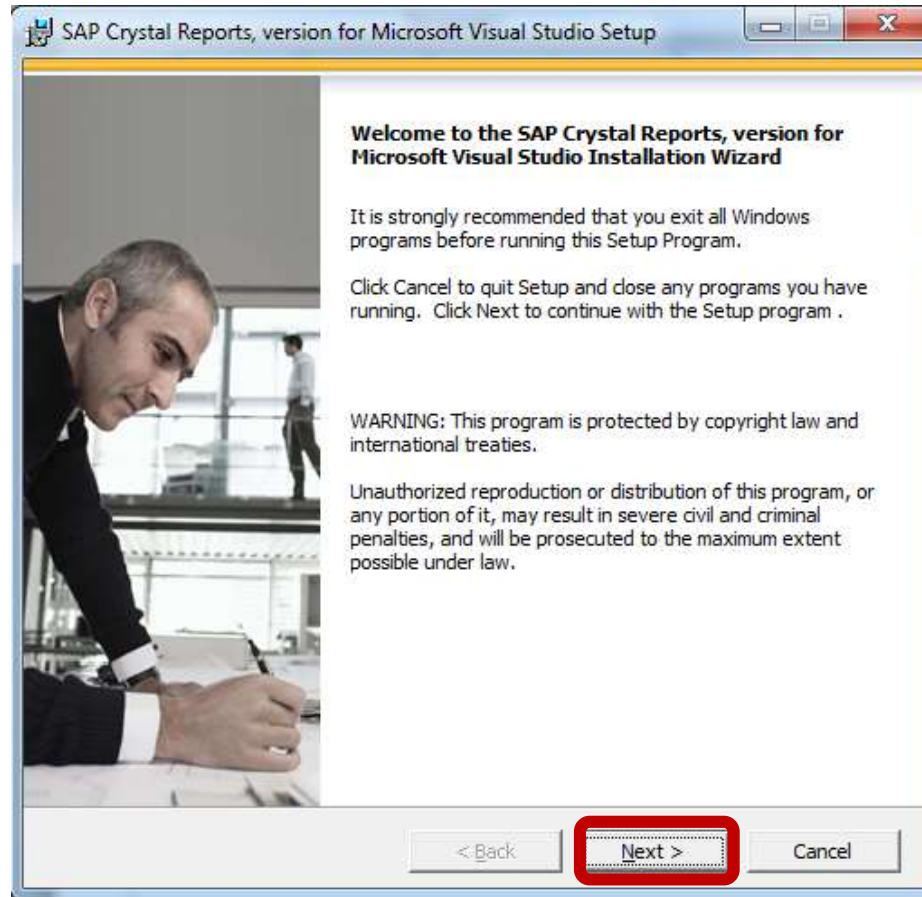
Crystal Reports Installation(cont'd)



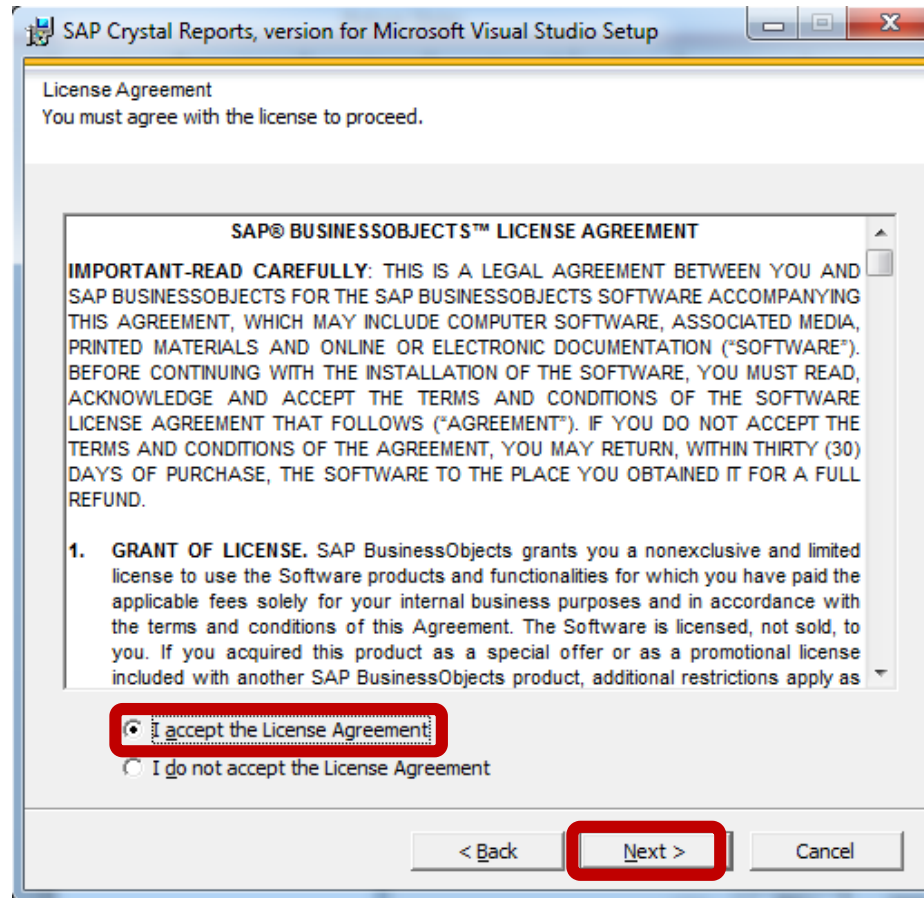
Crystal Reports Installation(cont'd)



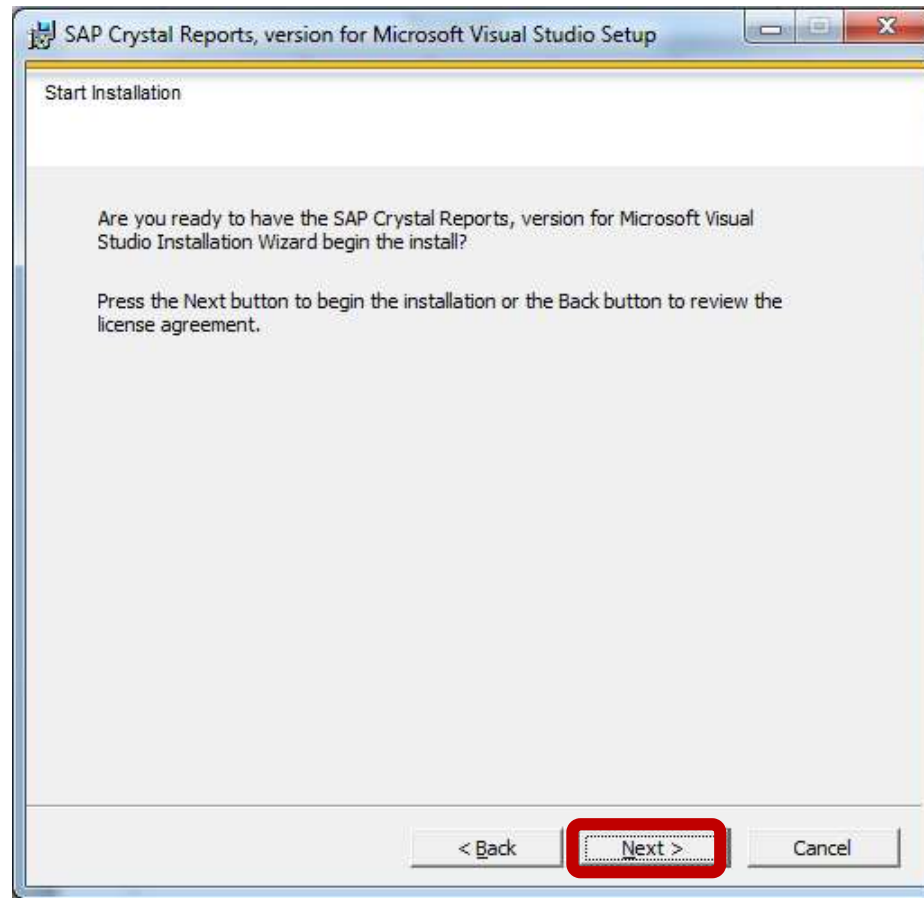
Crystal Reports Installation(cont'd)



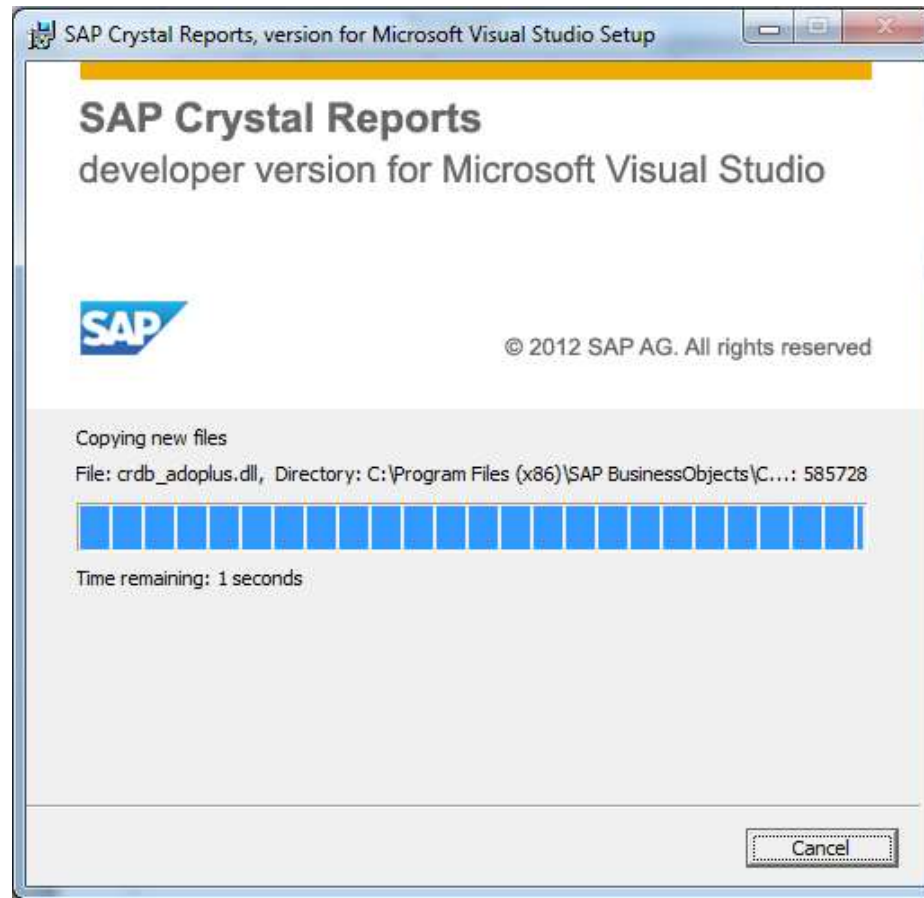
Crystal Reports Installation(cont'd)



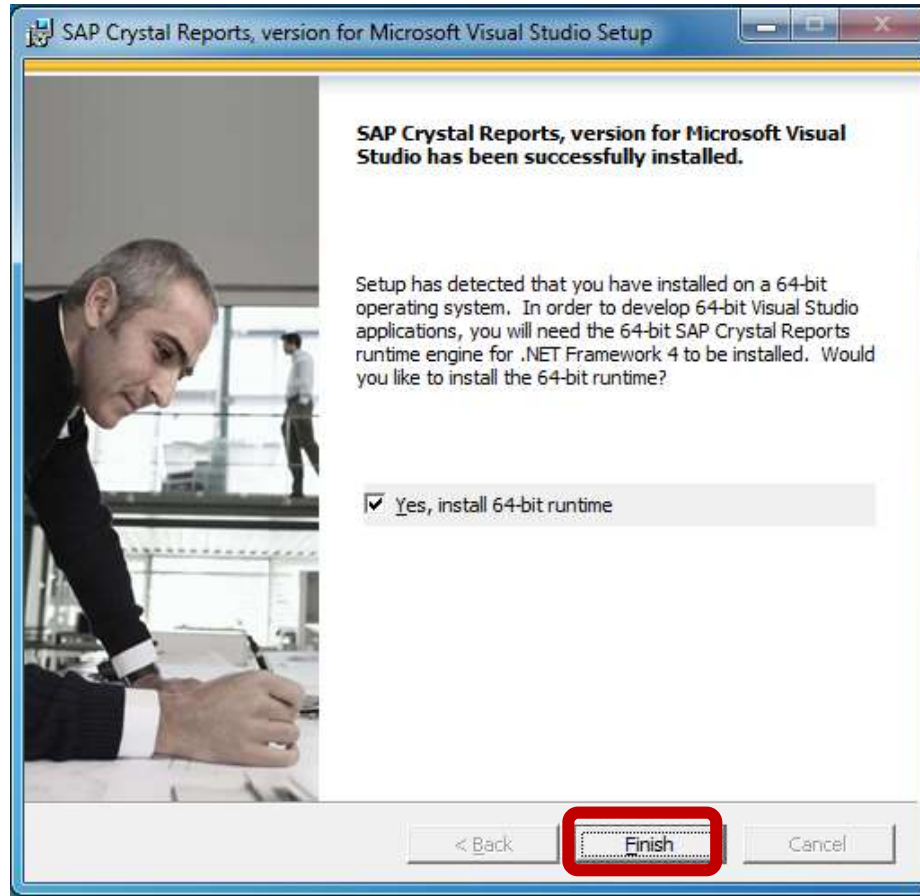
Crystal Reports Installation(cont'd)



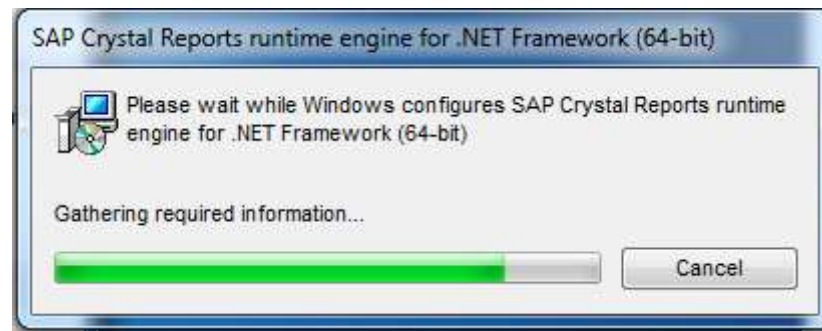
Crystal Reports Installation(cont'd)



Crystal Reports Installation(cont'd)



Crystal Reports Installation(cont'd)



Creating New Crystal Report Application

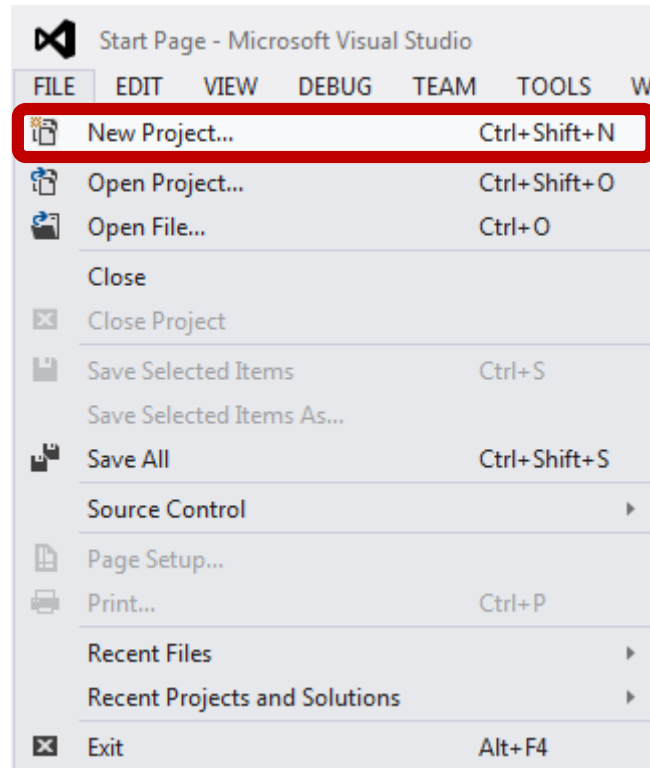
Crystal Reports Creation(cont'd)

- Create a Report that displays the names of the movies **for each** category and the names of the actors **for each** movie title.

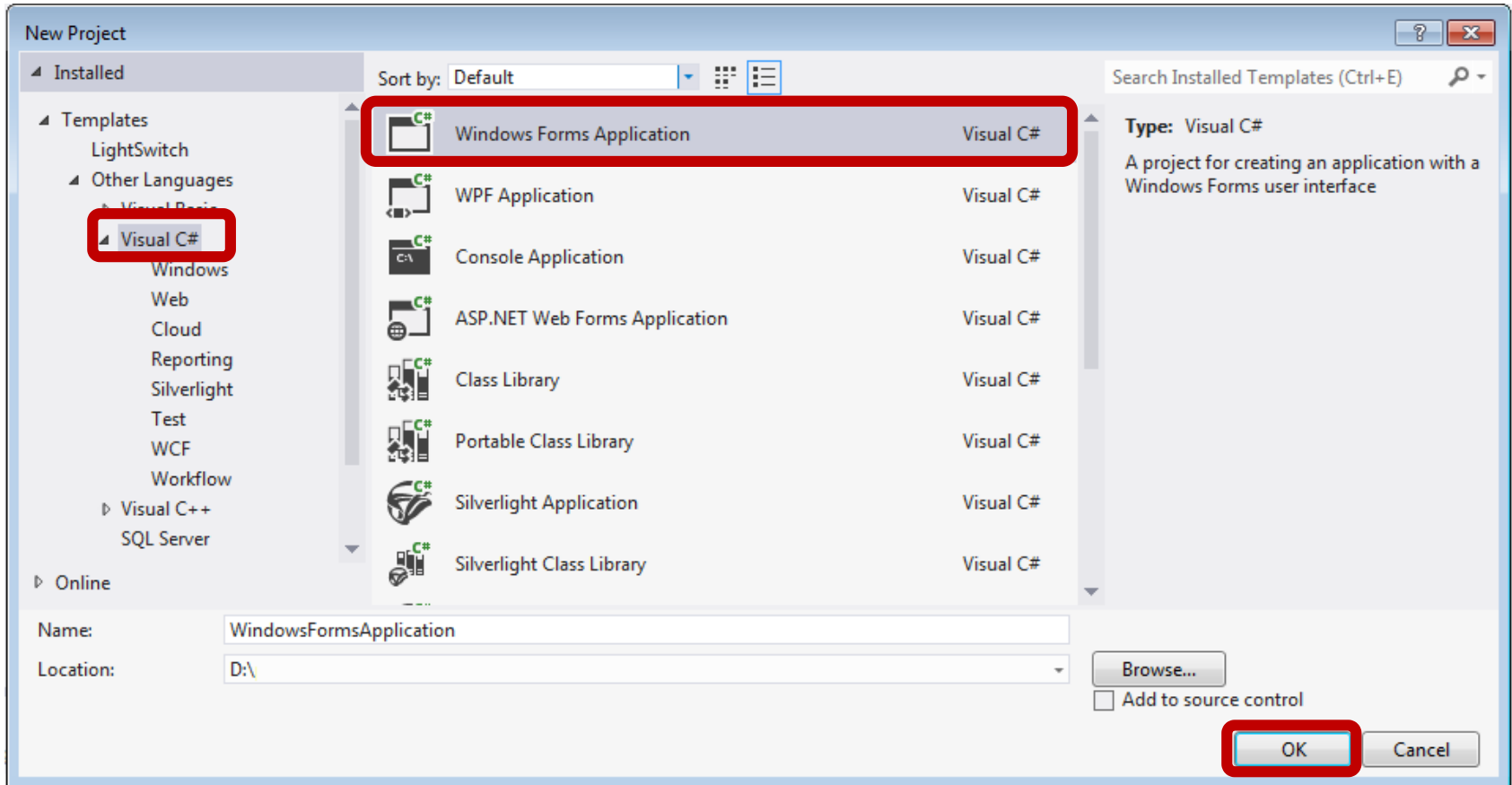
The screenshot displays a Crystal Reports form with three sections, each representing a movie category. Each section contains a 'Category Name' field, a 'Film Title' field, and an 'Actor Name' field. The 'Category Name' field is highlighted in green, and the 'Film Title' and 'Actor Name' fields are highlighted in blue. The 'Actor Name' field is multi-line, allowing for multiple actors to be listed for each movie title.

Category Name	Film Title	Actor Name
Action	Men in Black 3	George Clooney Will Smith
Adventure	The Twilight Saga Breaking Dawn	Kristen Stewart Robert Pattinson Taylor Lautner
	The Twilight Saga: Eclipse	Kristen Stewart Robert Pattinson Taylor Lautner
Animation	Shrek Forever After	Eddie Murphy Cameron Diaz

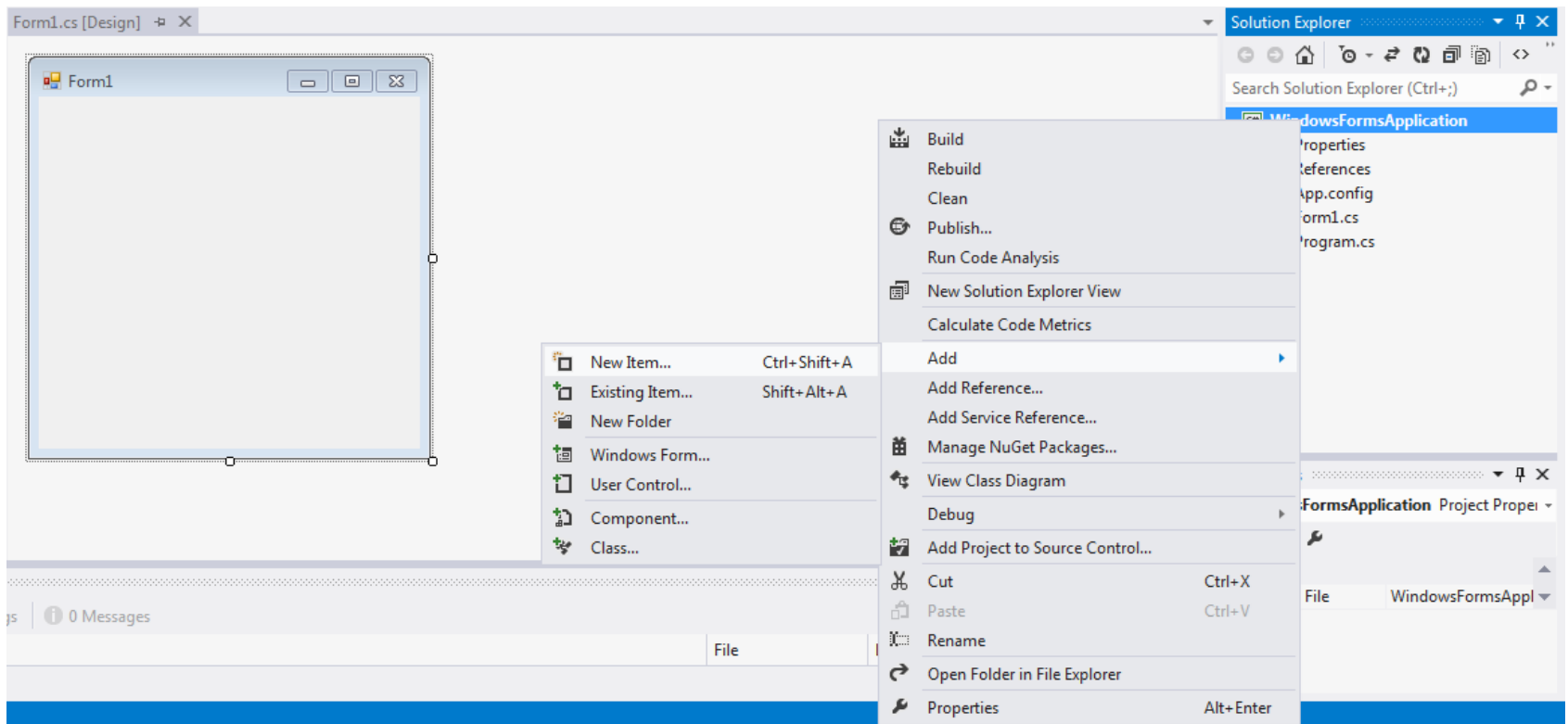
Crystal Reports Creation



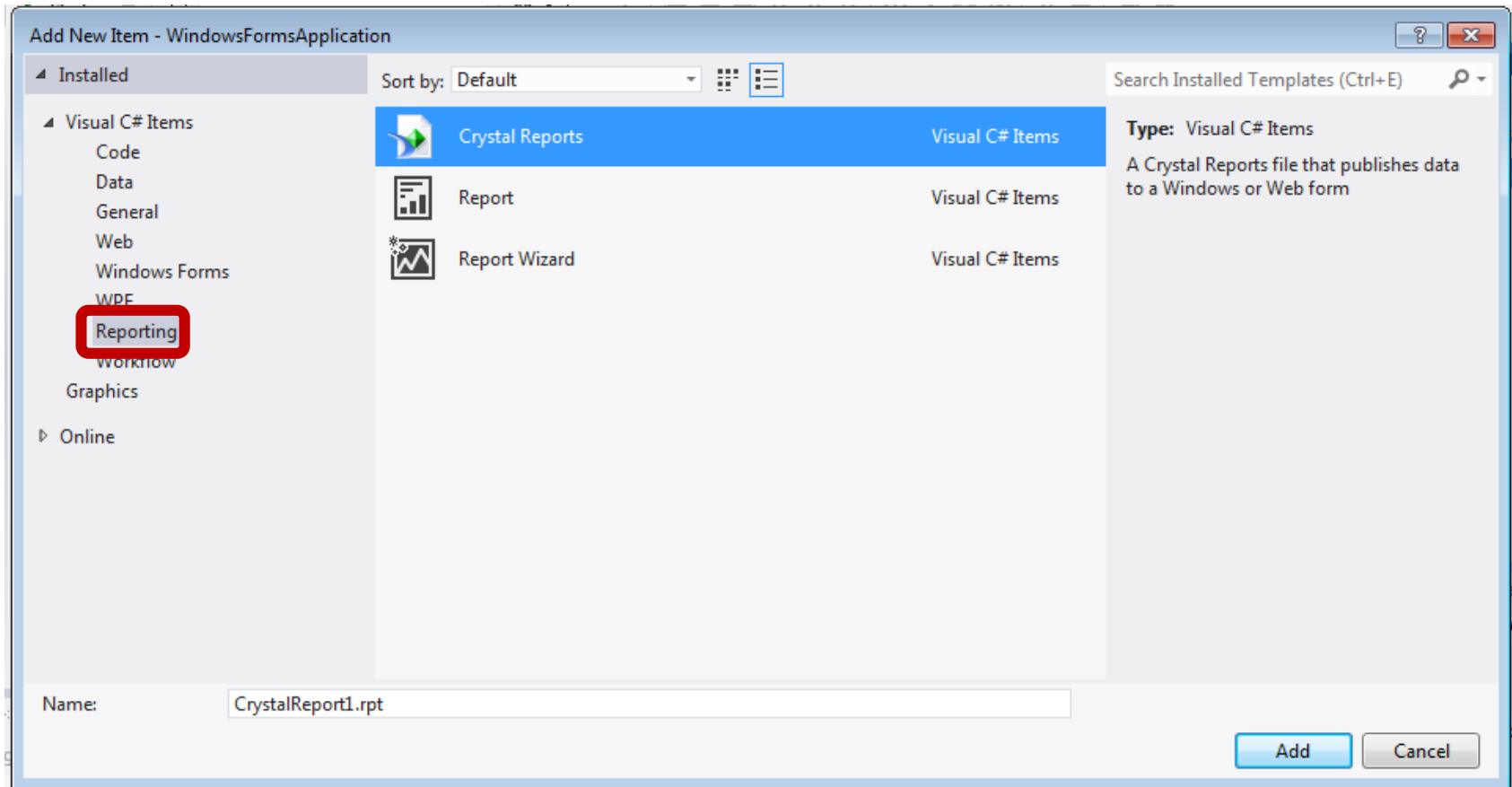
Crystal Reports Creation(cont'd)



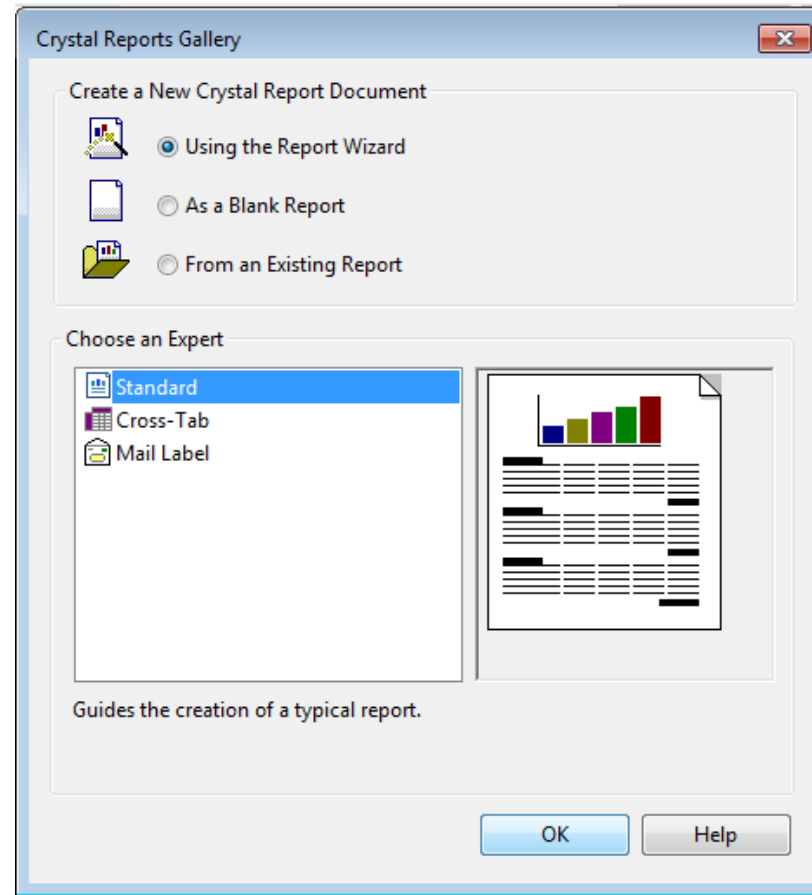
Crystal Reports Creation(cont'd)



Crystal Reports Creation(cont'd)



Crystal Reports Creation(cont'd)



Crystal Reports Creation(cont'd)

□ Create a New Crystal Report Document

■ As a Blank Report

Opens the Report Designer to build the report from scratch.

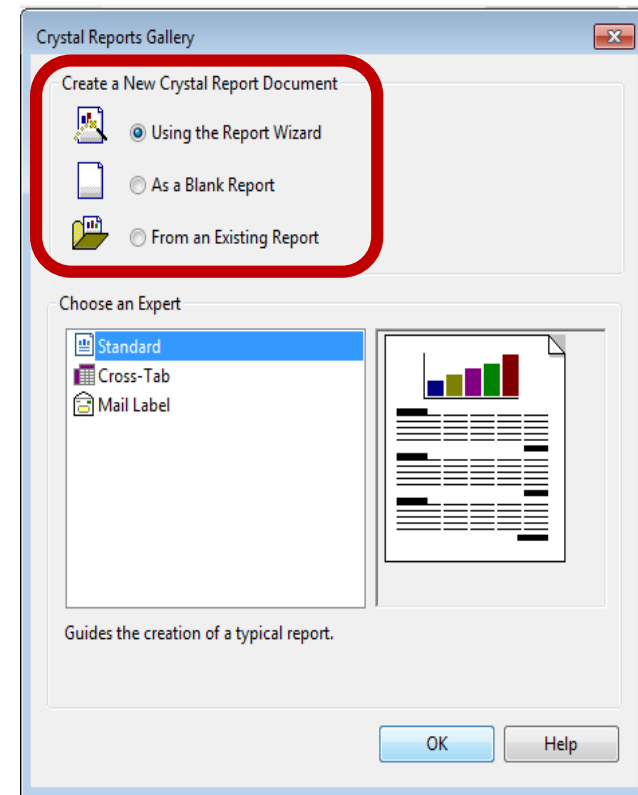
■ From an Existing Report

Creates a new report with the same design as another report you specify.

■ Using the Report Wizard

Create a new report using the report wizards, called Experts.

These Experts walk you through a series of steps to select the data and format the report.



Crystal Reports Creation(cont'd)

□ Choose an Expert (using the report wizard)

■ Standard Report

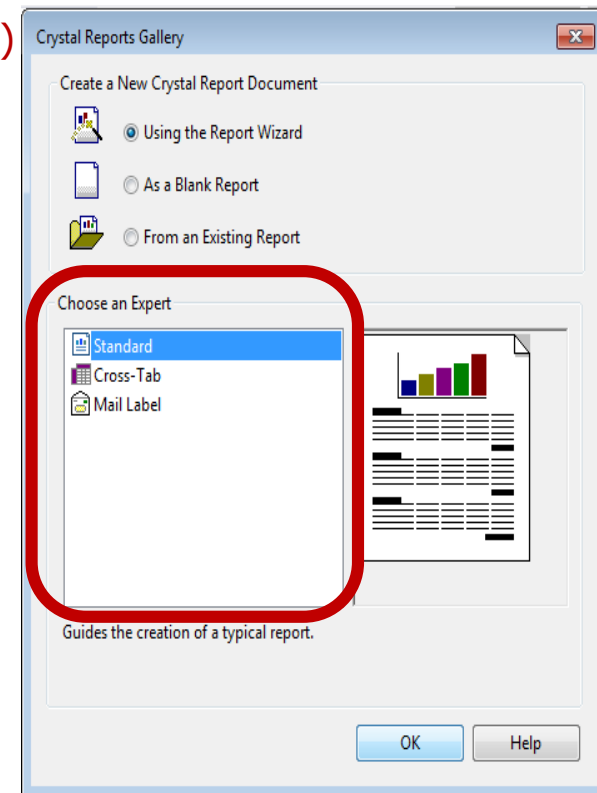
Allows displaying lists of data and grouping. (typical report)

■ Cross-Tab Report

Allows transforming data into grid (columns and rows).

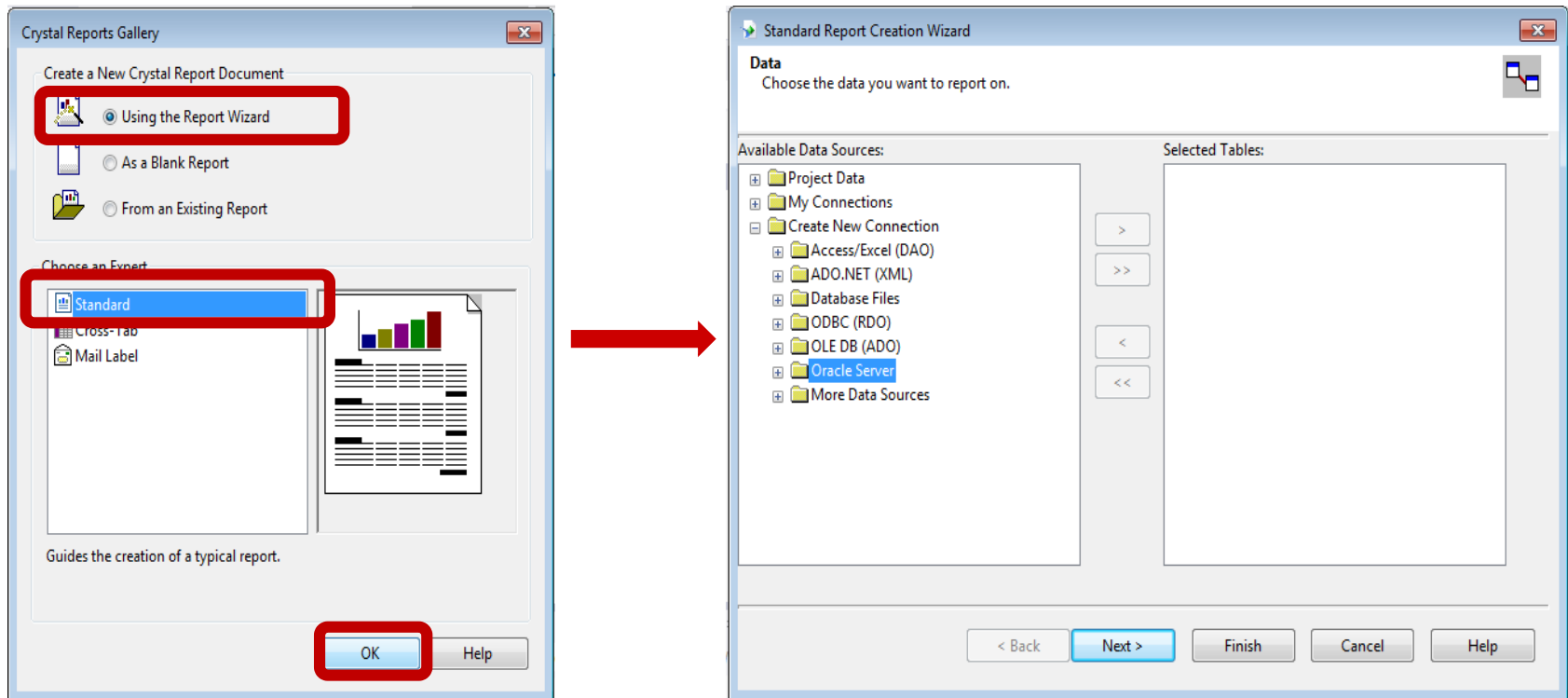
■ Mail Label Report

Allows creating a report with multiple columns. (commonly used to create a sheet of address labels).



Crystal Reports Creation(cont'd)

Select Report Wizard and Standard Expert and then click on next.



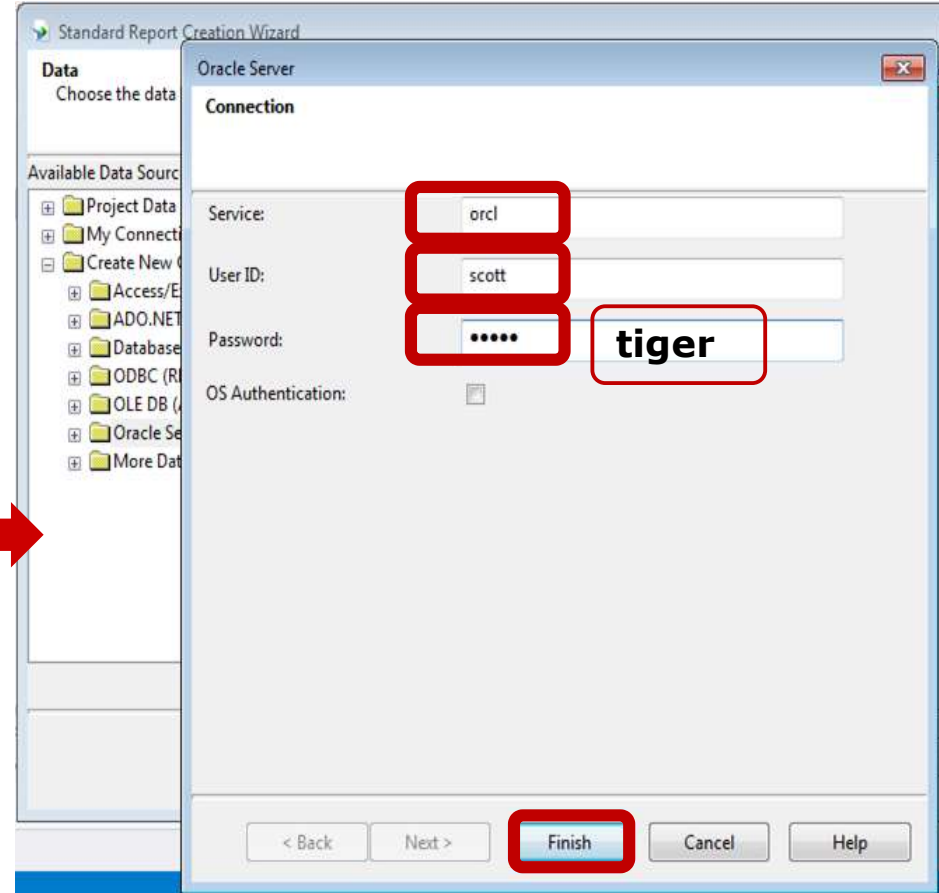
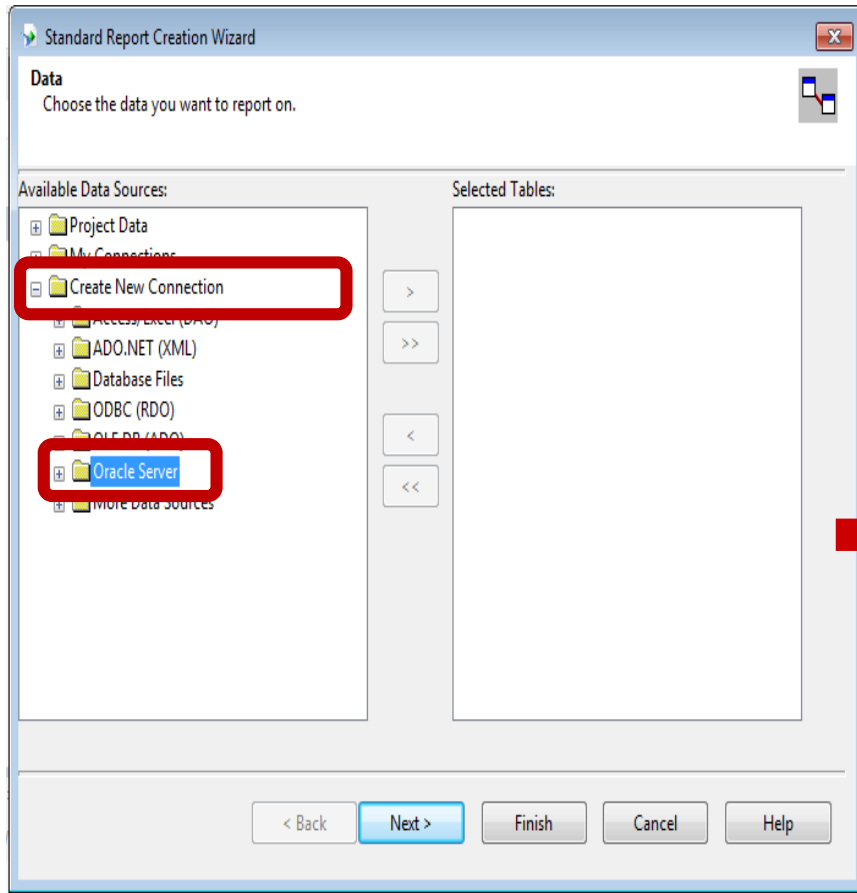
Crystal Reports Creation(cont'd)

- Standard Report Creation wizard allows you to choose the data source that would be used in the report.
 - Create New Connection

This option allows you to create a new connection to data source.
 - My Connections

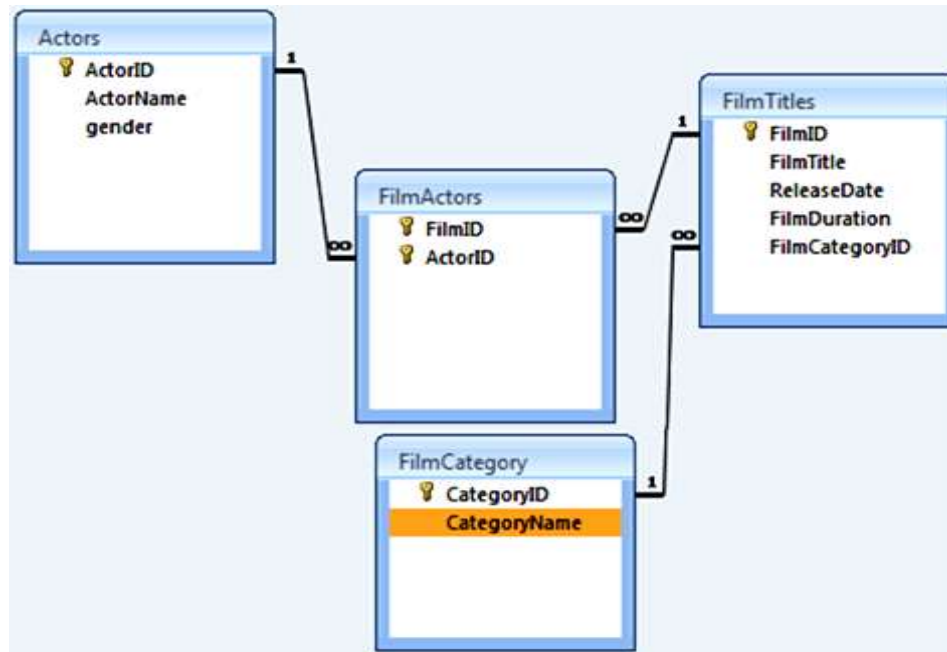
This Option lists the most recently used data source connection, so that you can quickly add it to your report.

Crystal Reports Creation(cont'd)

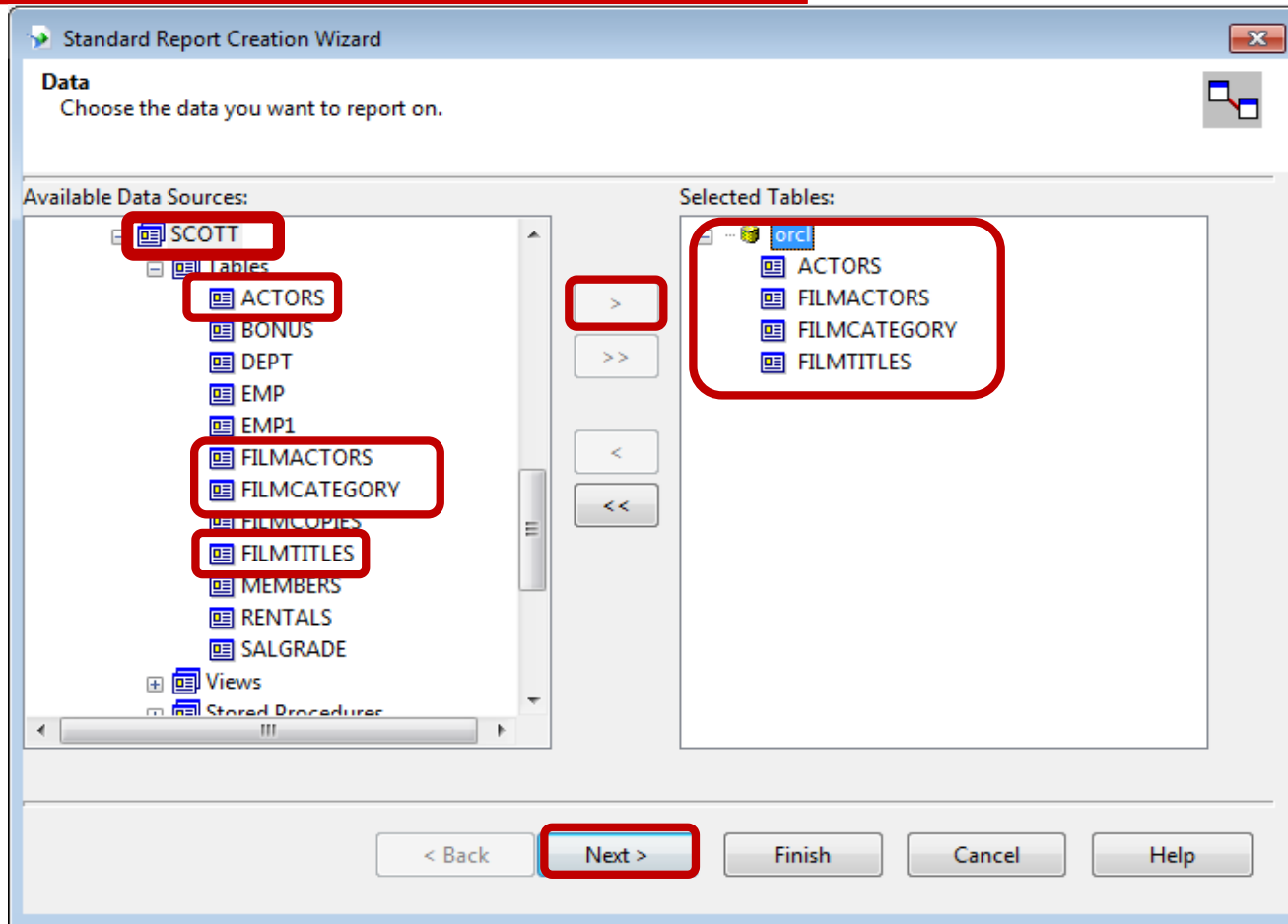


Crystal Reports Creation(cont'd)

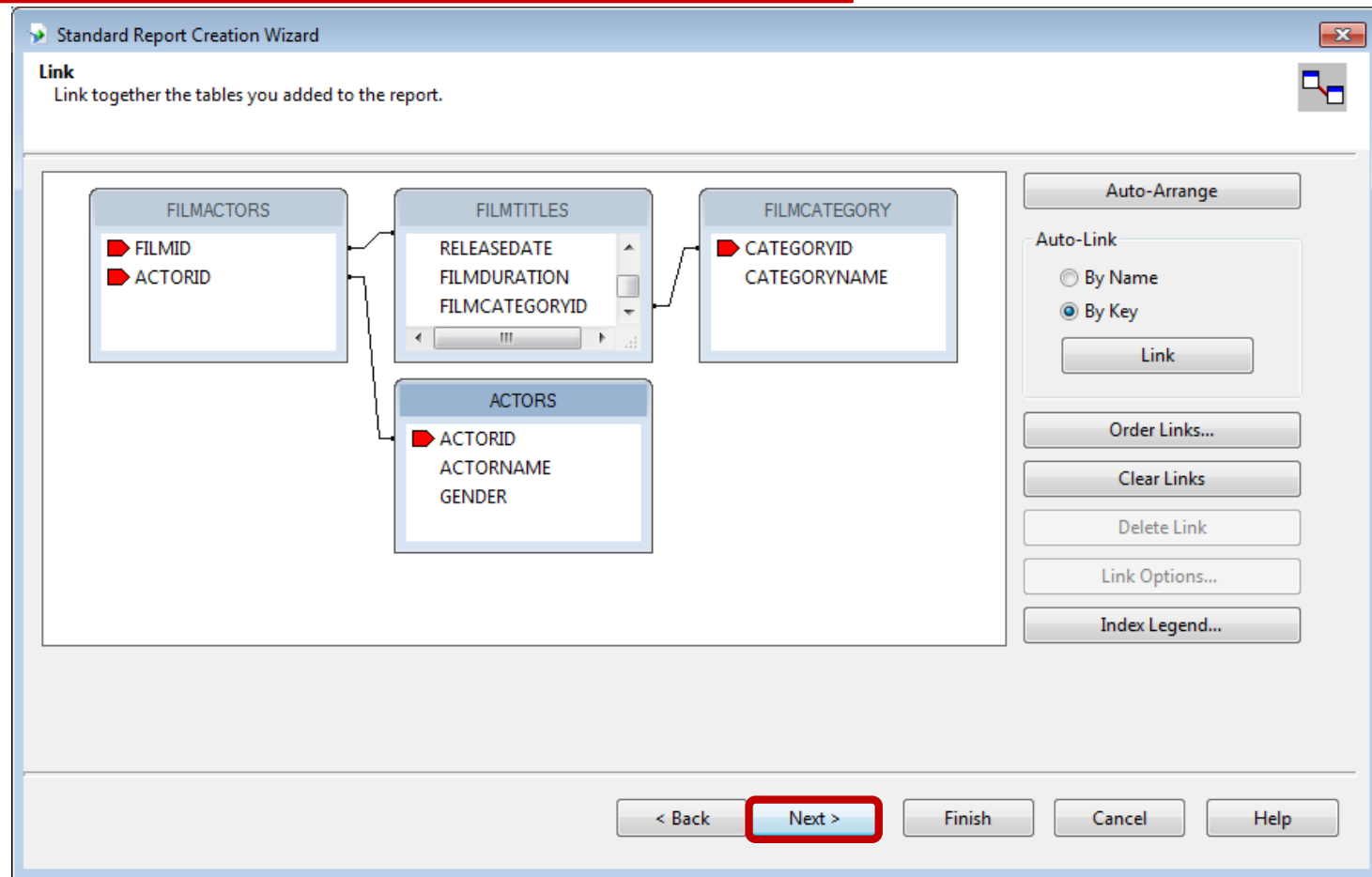
- Create a Report that displays the names of the movies for each category and the names of the actors for each movie title.



Crystal Reports Creation(cont'd)



Crystal Reports Creation(cont'd)



The screenshot shows the 'Link' step of the 'Standard Report Creation Wizard'. The window title is 'Standard Report Creation Wizard'. The subtitle is 'Link' with the instruction 'Link together the tables you added to the report.' The main area displays four tables: FILMACTORS, FILMTITLES, FILMCATEGORY, and ACTORS. FILMACTORS has fields FILMID and ACTORID. FILMTITLES has fields RELEASEDATE, FILMDURATION, and FILMCATEGORYID. FILMCATEGORY has fields CATEGORYID and CATEGORYNAME. ACTORS has fields ACTORID, ACTORNAME, and GENDER. Lines connect FILMID to FILMCATEGORYID and ACTORID to ACTORID. On the right, there is an 'Auto-Link' section with radio buttons for 'By Name' and 'By Key' (selected), and a 'Link' button. Below this are buttons for 'Auto-Arrange', 'Order Links...', 'Clear Links', 'Delete Link', 'Link Options...', and 'Index Legend...'. At the bottom, there are navigation buttons: '< Back', 'Next >' (highlighted with a red box), 'Finish', 'Cancel', and 'Help'.

Standard Report Creation Wizard

Link
Link together the tables you added to the report.

FILMACTORS
FILMID
ACTORID

FILMTITLES
RELEASEDATE
FILMDURATION
FILMCATEGORYID

FILMCATEGORY
CATEGORYID
CATEGORYNAME

ACTORS
ACTORID
ACTORNAME
GENDER

Auto-Link
☐ By Name
☒ By Key
Link

Auto-Arrange

Order Links...

Clear Links

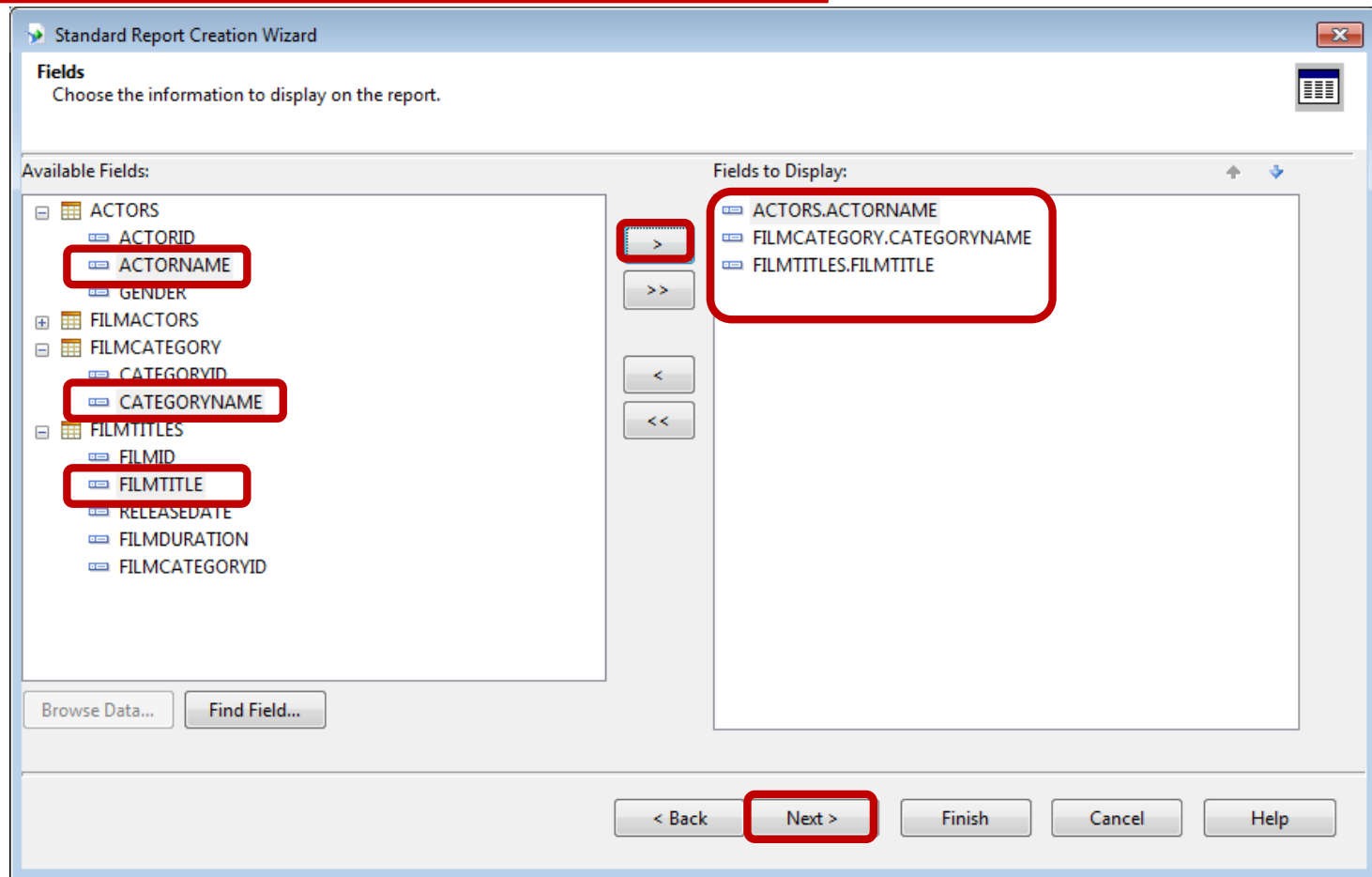
Delete Link

Link Options...

Index Legend...

< Back **Next >** Finish Cancel Help

Crystal Reports Creation(cont'd)



Crystal Reports Creation(cont'd)

The screenshot shows the 'Standard Report Creation Wizard' window, specifically the 'Grouping' step. The window title is 'Standard Report Creation Wizard'. The main heading is 'Grouping' with the subtitle '(Optional) Group the information on the report.'.

The 'Available Fields:' list on the left contains the following items:

- Report Fields
 - ACTORS.ACTORNAME
 - FILMCATEGORY.CATEGORYNAME** (highlighted with a red box)
 - FILMTITLES.FILMTITLE
- ACTORS
- FILMACTORS
- FILMCATEGORY
- FILMTITLES

The 'Group By:' list on the right contains the following item:

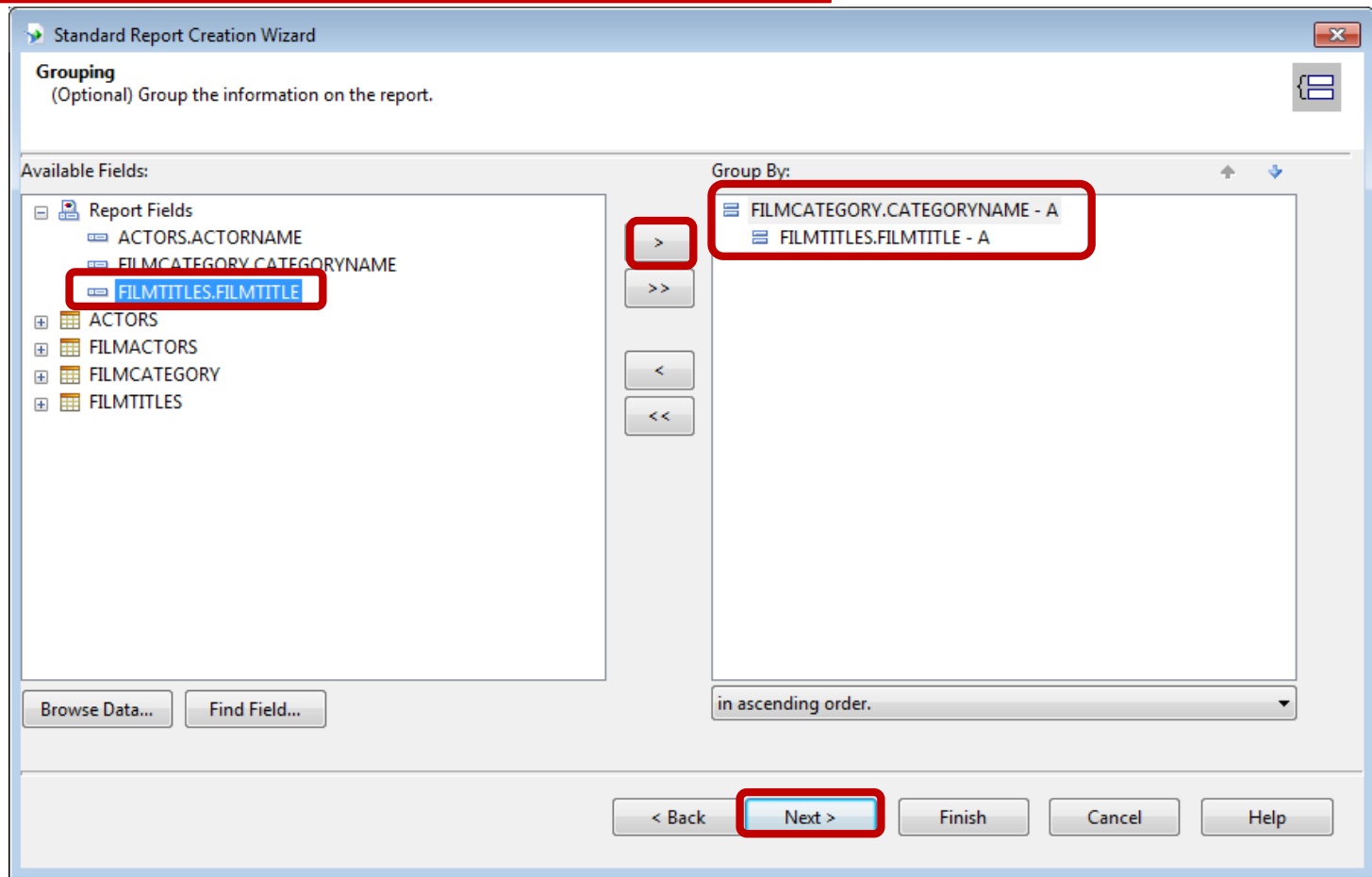
- FILMCATEGORY.CATEGORYNAME - A** (highlighted with a red box)

Navigation buttons between the lists include '>', '>>', '<', and '<<'. The '>' button is highlighted with a red box.

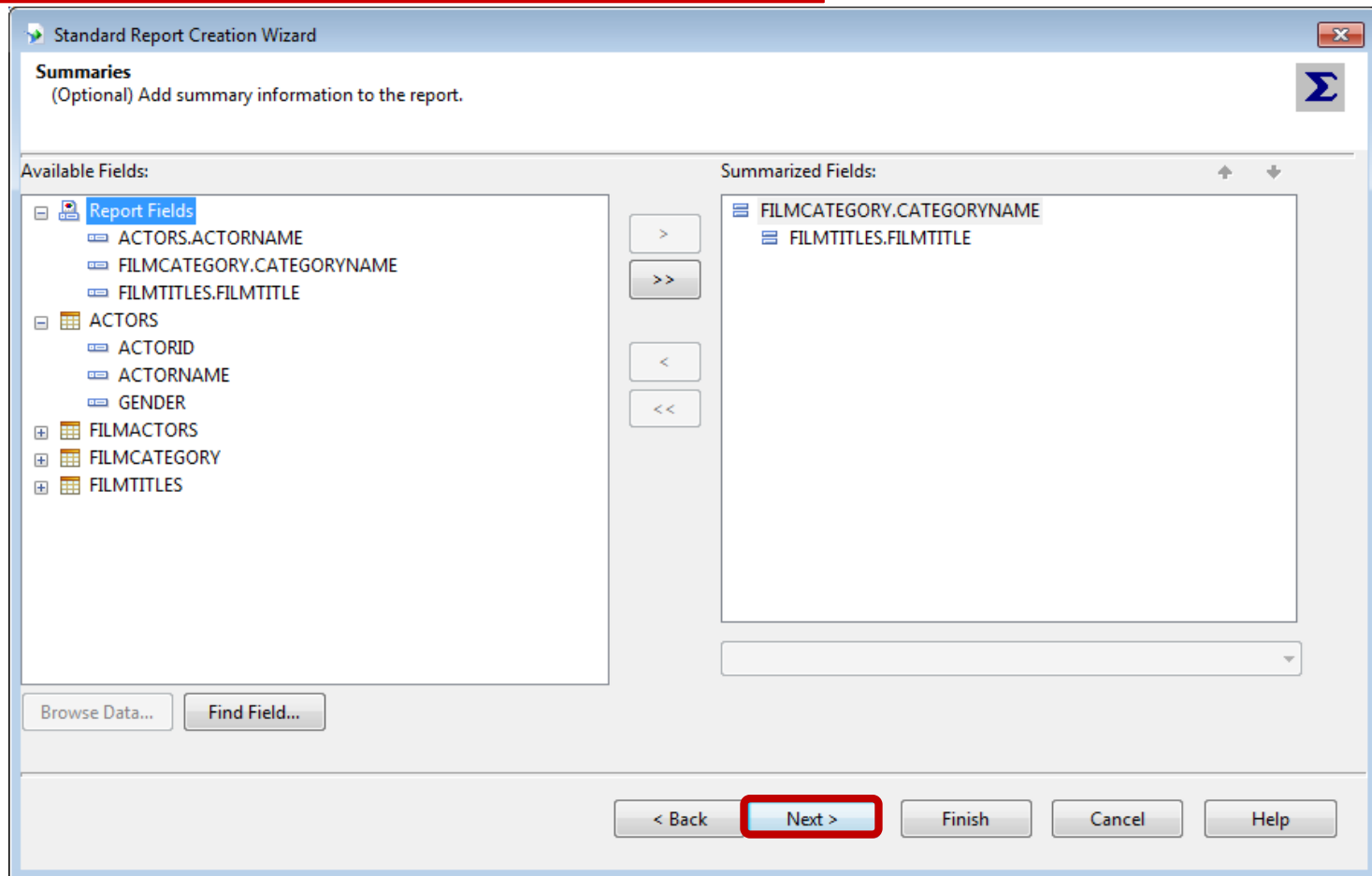
At the bottom of the 'Group By:' list, there is a dropdown menu set to 'in ascending order.'.

At the bottom of the wizard, there are five buttons: '< Back', 'Next >' (highlighted with a red box), 'Finish', 'Cancel', and 'Help'.

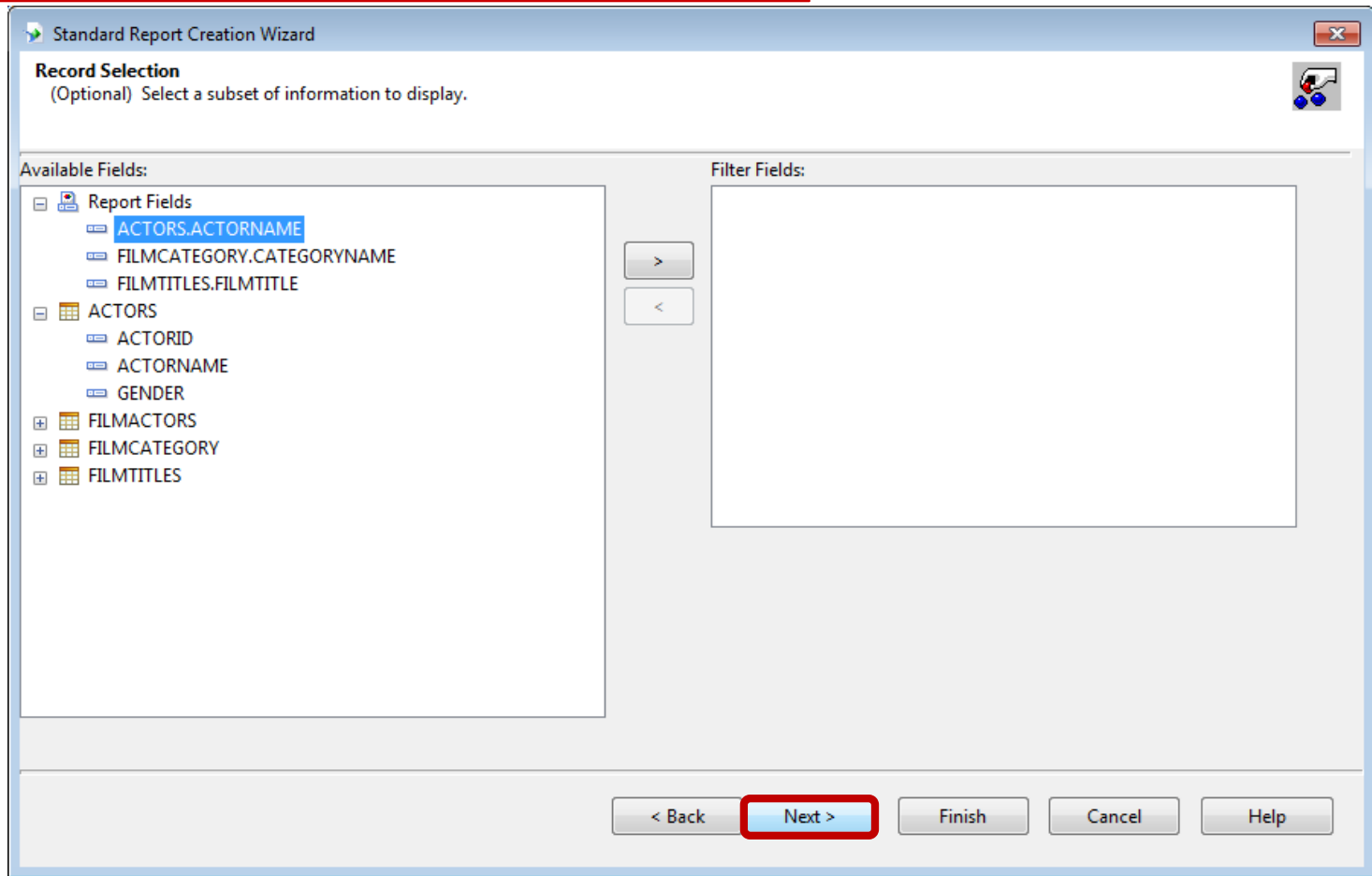
Crystal Reports Creation(cont'd)



Crystal Reports Creation(cont'd)



Crystal Reports Creation(cont'd)



The image shows the 'Standard Report Creation Wizard' window, specifically the 'Record Selection' step. The window title is 'Standard Report Creation Wizard'. Below the title bar, the text 'Record Selection' is followed by '(Optional) Select a subset of information to display.' The main area is divided into two panes: 'Available Fields' on the left and 'Filter Fields' on the right. The 'Available Fields' pane contains a tree view with the following items: 'Report Fields' (expanded) containing 'ACTORS.ACTORNAME', 'FILMCATEGORY.CATEGORYNAME', and 'FILMTITLES.FILMTITLE'; 'ACTORS' (expanded) containing 'ACTORID', 'ACTORNAME', and 'GENDER'; 'FILMACTORS'; 'FILMCATEGORY'; and 'FILMTITLES'. The 'Filter Fields' pane is empty. Between the two panes are two buttons: '>' and '<'. At the bottom of the window are five buttons: '< Back', 'Next >', 'Finish', 'Cancel', and 'Help'. The 'Next >' button is highlighted with a red rectangle.

Standard Report Creation Wizard

Record Selection
(Optional) Select a subset of information to display.

Available Fields:

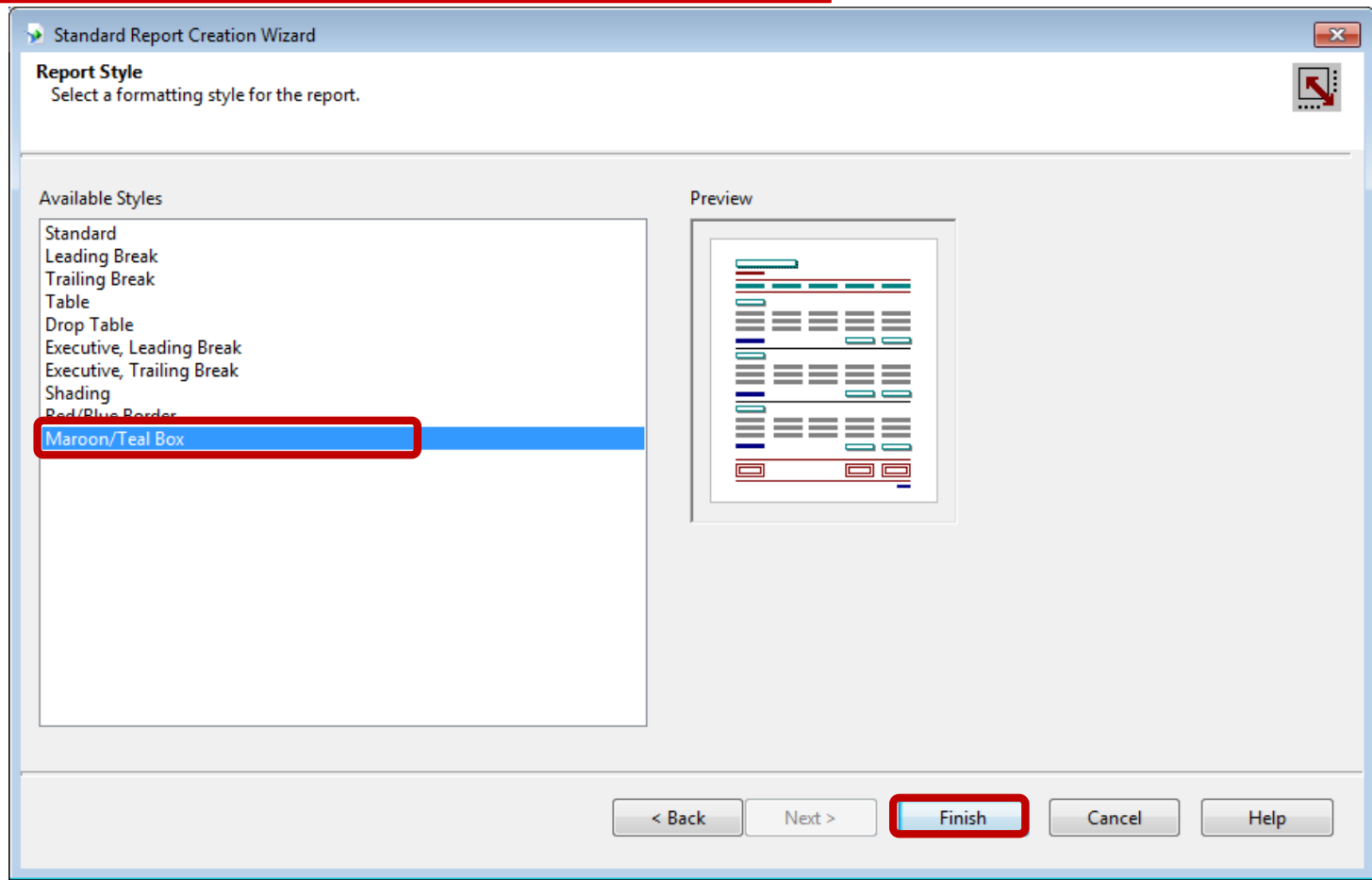
- Report Fields
 - ACTORS.ACTORNAME
 - FILMCATEGORY.CATEGORYNAME
 - FILMTITLES.FILMTITLE
- ACTORS
 - ACTORID
 - ACTORNAME
 - GENDER
- FILMACTORS
- FILMCATEGORY
- FILMTITLES

Filter Fields:

> <

< Back Next > Finish Cancel Help

Crystal Reports Creation(cont'd)



Report Preview

The screenshot displays the SAP Crystal Reports design environment. The interface includes a menu bar (FILE, EDIT, VIEW, PROJECT, BUILD, DEBUG, TEAM, TOOLS, CRYSTAL REPORTS, WINDOW, HELP), a toolbar, and a document window titled 'CrystalReport1.rpt* - Form1.cs [Design]'. On the left, a 'Toolbox' pane shows various report objects like Pointer, Text Object, Line Object, and Box Object. The main workspace shows a report preview with a table of movie data. The table has three columns: CATEGORY, FILMTITL, and ACTORN. The data is organized into sections: Action, Adventure, and The Twilight Saga: Eclipse. The 'Main Report Preview' tab is selected at the bottom.

CrystalReport1.rpt* - Form1.cs [Design]

Save data in the report

1 / 1+ 85%

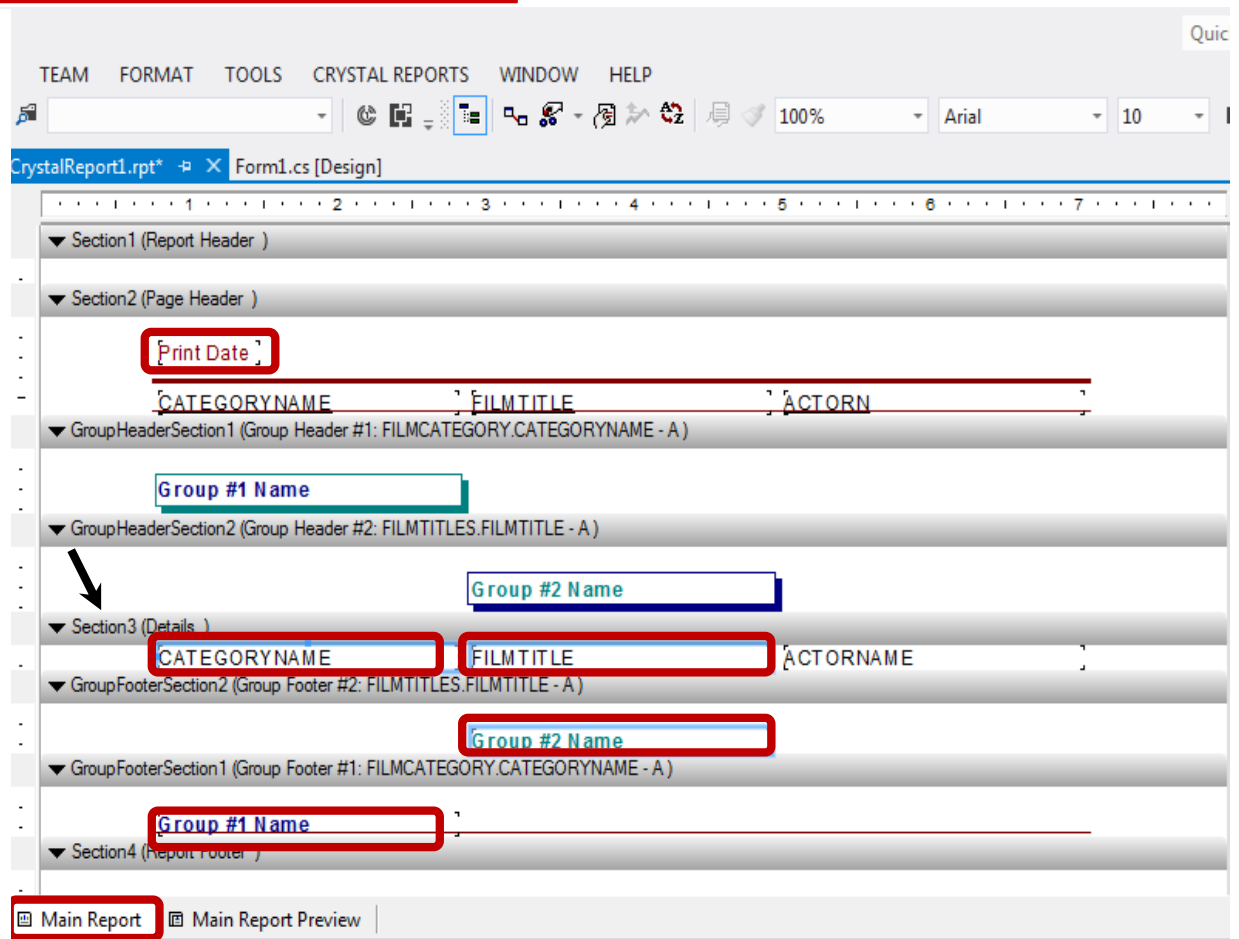
SAP CRYSTAL REPORTS*

CATEGORY	FILMTITL	ACTORN
Action		
Action	Men in Black 3	George Clooney
Action	Men in Black 3	Will Smith
Action	Men in Black 3	
Adventure		
Adventure	The Twilight Saga: Breaking Dawn	Kristen Stewart
Adventure	The Twilight Saga: Breaking Dawn	Robert Pattinson
Adventure	The Twilight Saga: Breaking Dawn	Taylor Lautner
Adventure	The Twilight Saga: Eclipse	Kristen Stewart
Adventure	The Twilight Saga: Eclipse	Robert Pattinson
Adventure	The Twilight Saga: Eclipse	Taylor Lautner

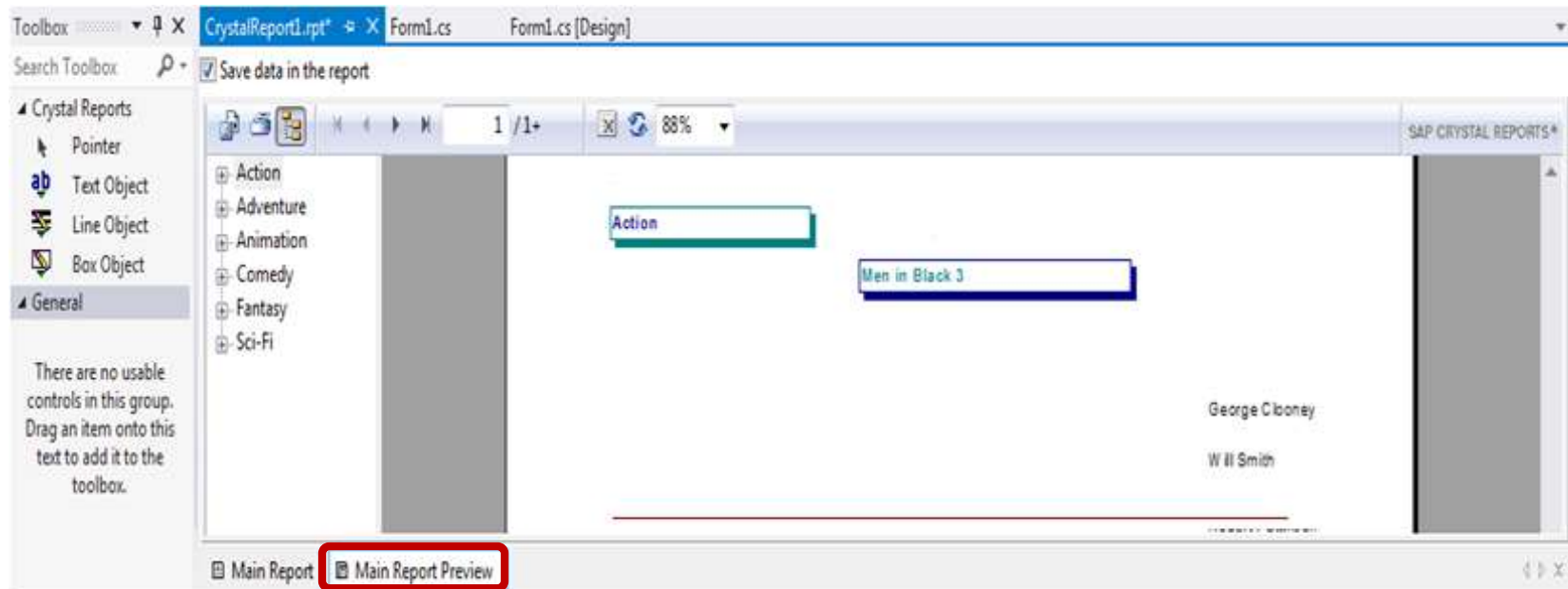
Main Report Main Report Preview

Modify Report Design

- **Category name** and **film title** are repeated for each actor name because they are included in the **Details section** which displays the included columns for each row
- To prevent repetition, select the column names and press the Del button



Modify Report Design(cont'd)



Inserting Labels into Report

The screenshot displays the SAP Crystal Reports Designer interface. On the left, the 'Toolbox' pane shows the 'Crystal Reports' group expanded, with the 'General' sub-group selected. A message states: 'There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.' The main design area shows a report layout with two sections. The top section has a header 'Category Name' with a red arrow pointing to it, followed by a text box containing 'Action'. To the right, the header 'Film Title' has a red arrow pointing to it, followed by a text box containing 'Men in Black 3'. Below these, the header 'Actor Name' has a red arrow pointing to it, followed by a list of actors: 'George Clooney' and 'Will Smith'. The bottom section has a header 'Category Name' with a red arrow pointing to it, followed by a text box containing 'Adventure'. To the right, the header 'Film Title' has a red arrow pointing to it, followed by a text box containing 'The Twilight Saga Breaking Dawn'. Below these, the header 'Actor Name' has a red arrow pointing to it, followed by a list of actors: 'Kristen Stewart' and 'Robert Pattinson'. The status bar at the bottom shows 'Main Report' and 'Main Report Preview' tabs.

CrystalReport1.rpt* Form1.cs Form1.cs [Design]

Search Toolbox Save data in the report

Crystal Reports

- Pointer
- Text Object
- Line Object
- Box Object
- General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

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SAP CRYSTAL REPORTS*

Category Name →

Action

Film Title →

Men in Black 3

Actor Name →

George Clooney

Will Smith

Category Name

Adventure

Film Title

The Twilight Saga Breaking Dawn

Actor Name

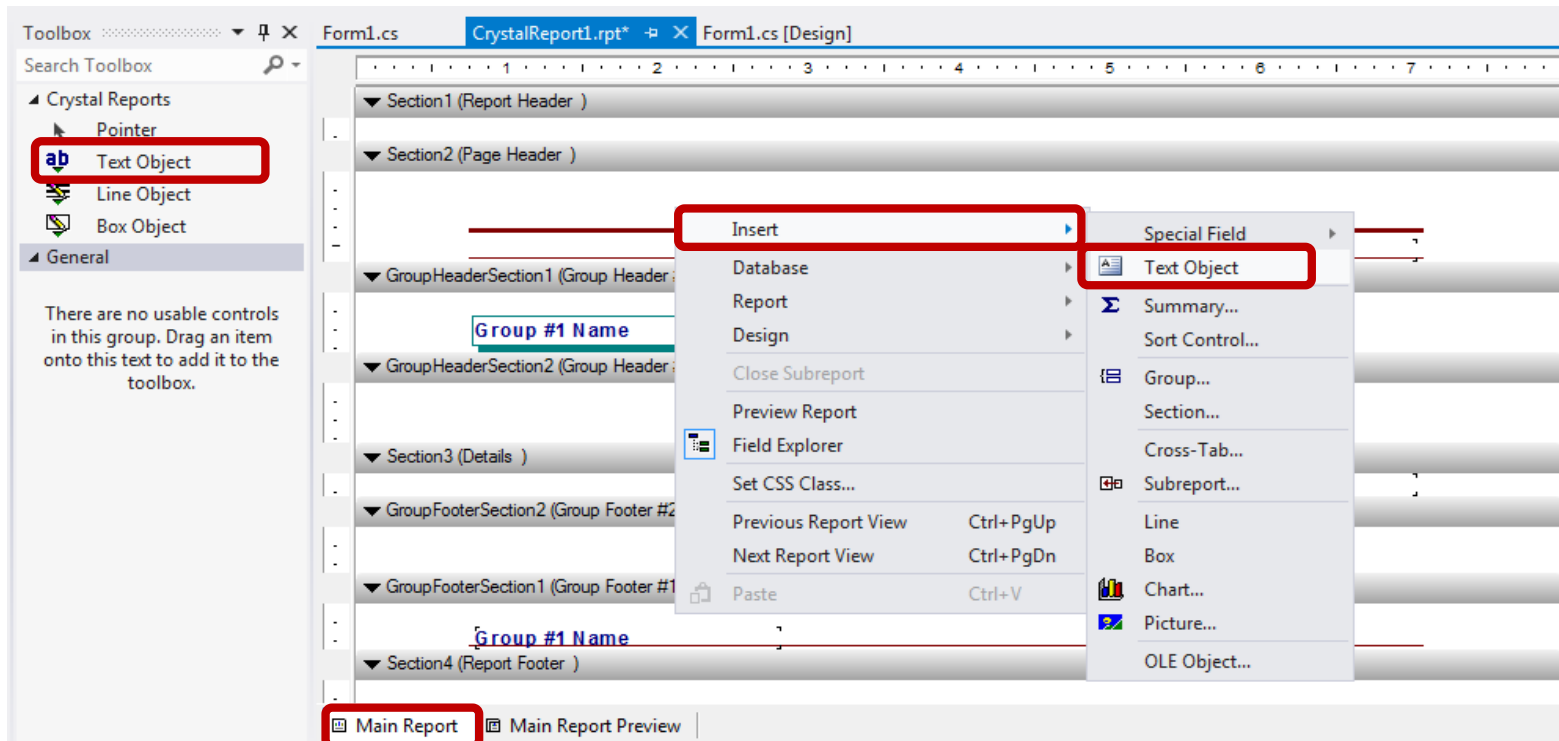
Kristen Stewart

Robert Pattinson

Main Report Main Report Preview

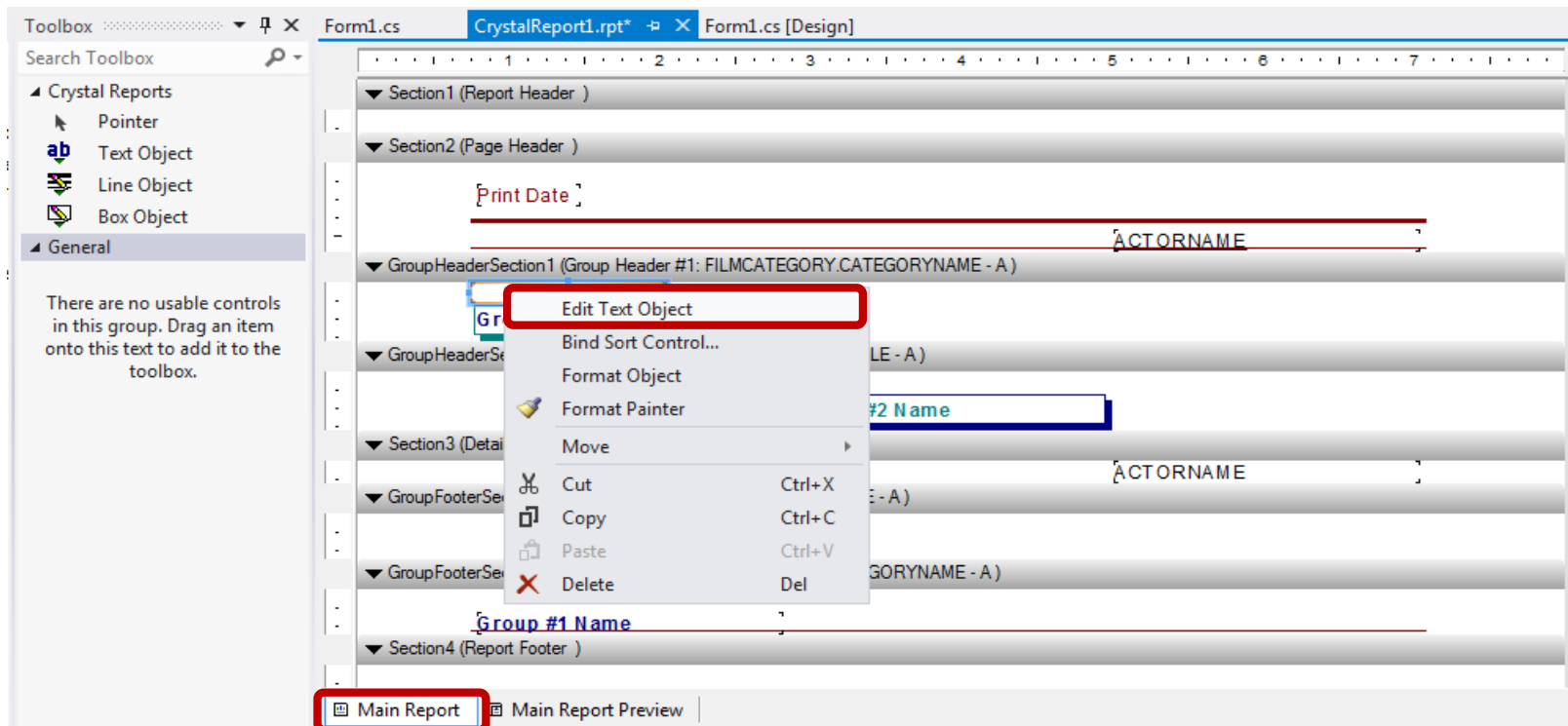
Inserting Labels into Report (cont'd)

- ❑ For Adding New Text Object, Right click on crystal reports designer window.

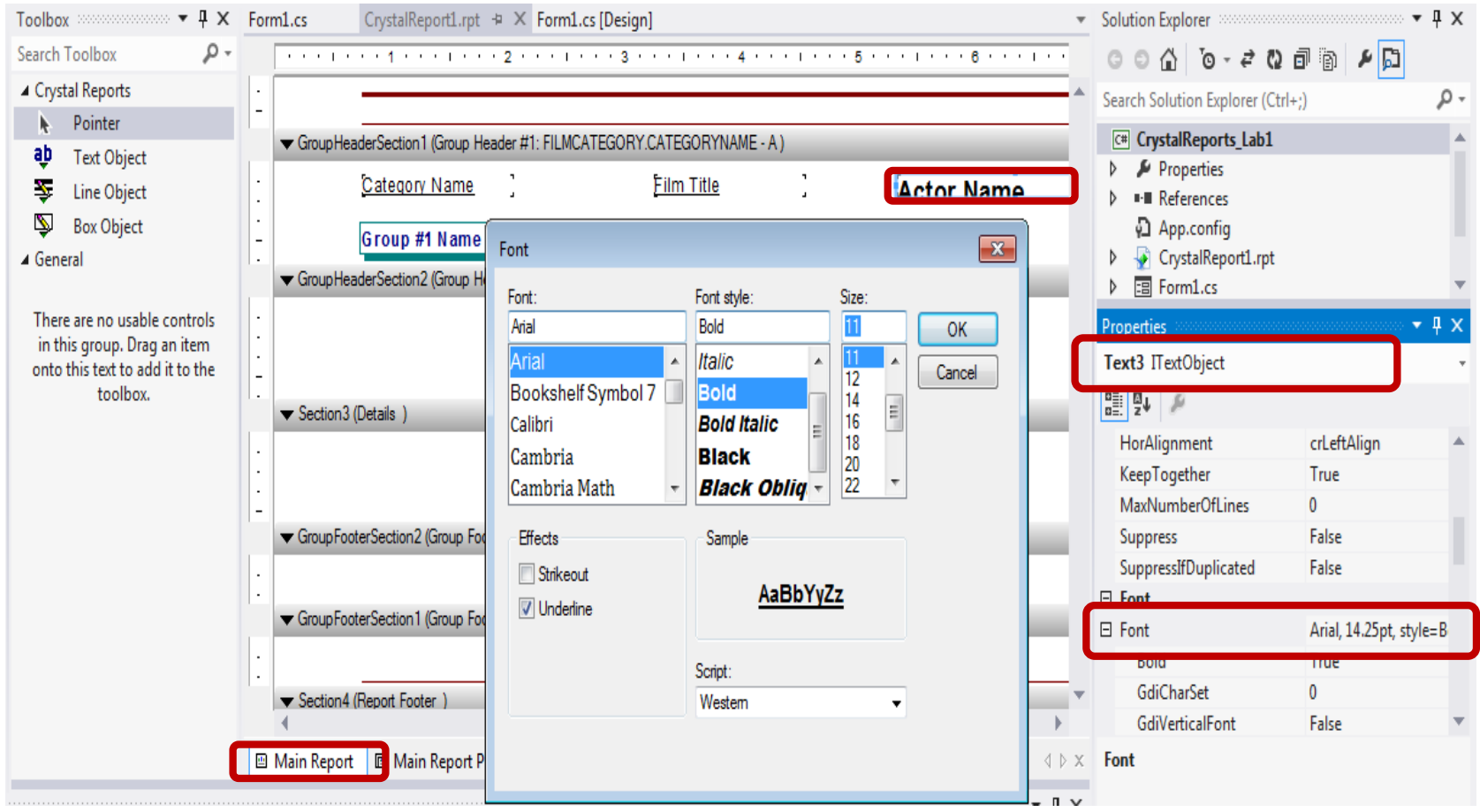


Inserting Labels into Report (cont'd)

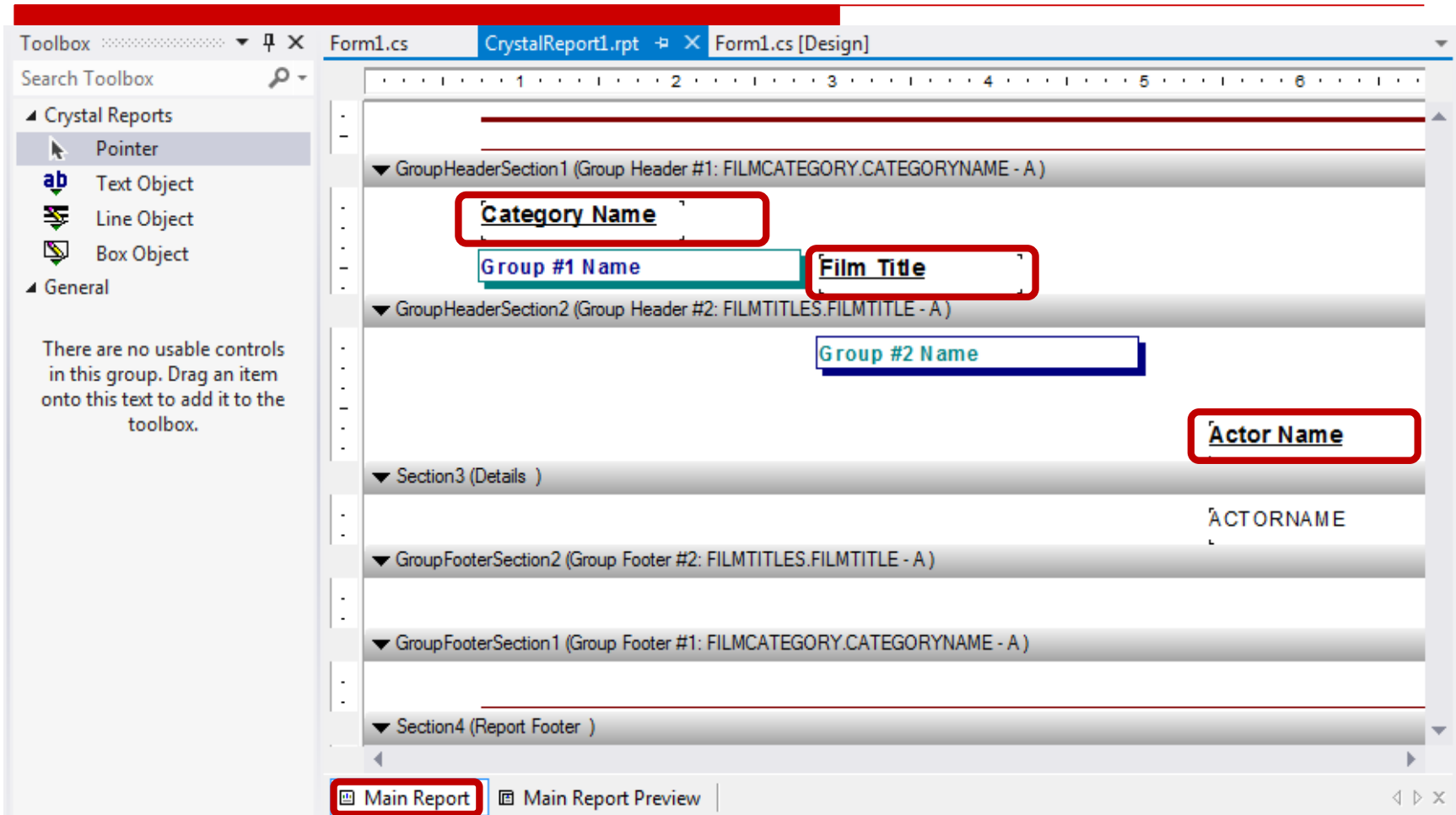
- For Editing the text in the Text Object, Right click on Text Object then Edit Text Object.



Inserting Labels into Report (cont'd)



Inserting Labels into Report (cont'd)



Inserting Labels into Report (cont'd)

The screenshot shows the SAP Crystal Reports Designer interface. The left-hand toolbox is expanded to the 'General' group, which contains a message: 'There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.' The main design area displays a report with two sections. Each section has a 'Category Name' label and a 'Film Title' label. The first section shows 'Action' for the category and 'Men in Black 3' for the film title. The second section shows 'Adventure' for the category and 'The Twilight Saga Breaking Dawn' for the film title. Below each film title, the 'Actor Name' is listed: 'George Clooney' and 'Will Smith' for the first section, and 'Kristen Stewart' and 'Robert Pattinson' for the second section. The bottom status bar shows two tabs: 'Main Report' and 'Main Report Preview', with the latter being the active tab.

CrystalReport1.rpt* Form1.cs Form1.cs [Design]

Search Toolbox Save data in the report

Crystal Reports

- Pointer
- Text Object
- Line Object
- Box Object
- General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

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SAP CRYSTAL REPORTS*

Category Name

Action

Film Title

Men in Black 3

Actor Name

George Clooney

Will Smith

Category Name

Adventure

Film Title

The Twilight Saga Breaking Dawn

Actor Name

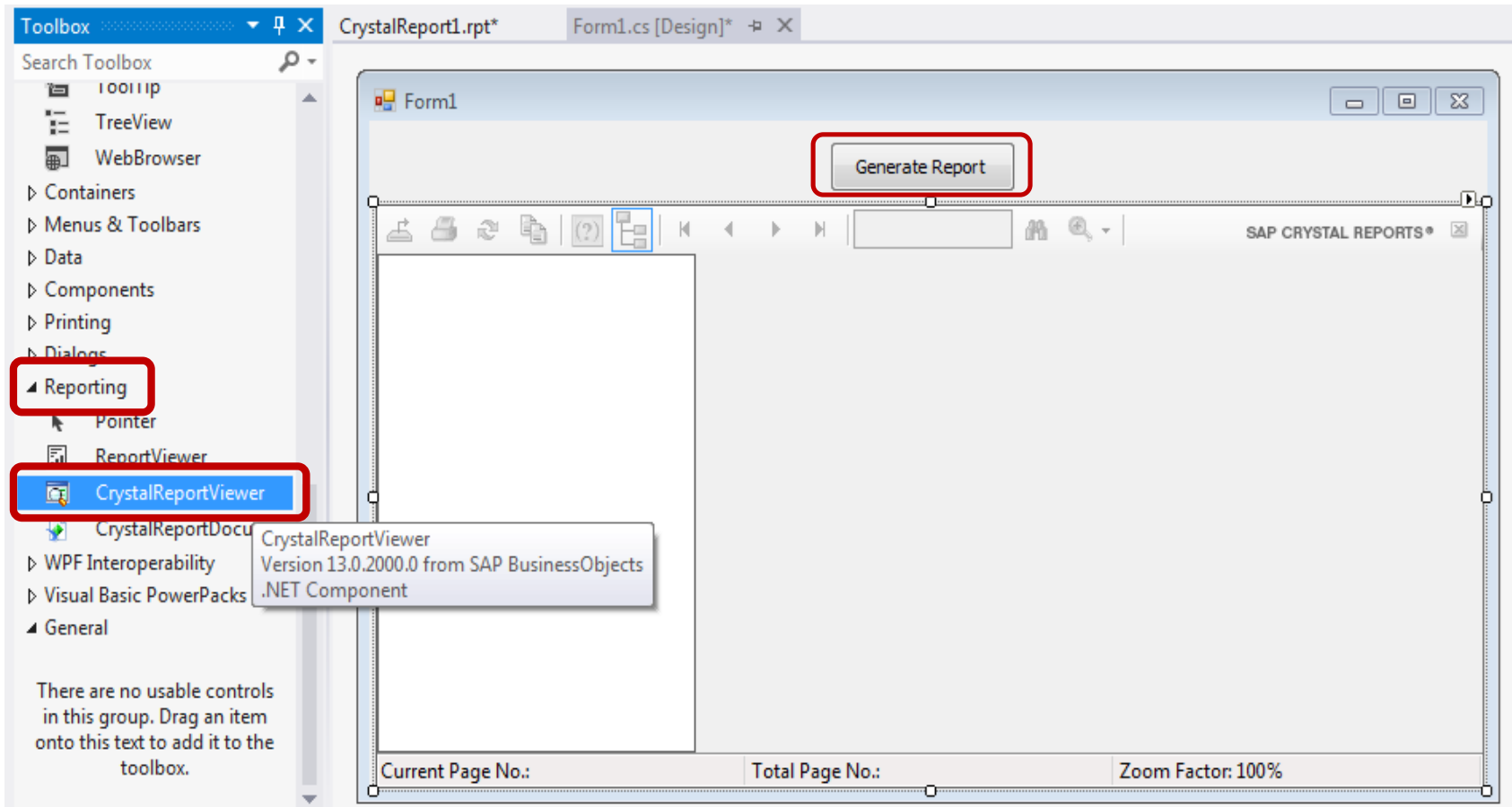
Kristen Stewart

Robert Pattinson

Main Report Main Report Preview

Calling Crystal Reports From C# Form

Crystal Reports Creation(cont'd)



```
Form1.cs*  X  Form1.cs [Design]*  Program.cs
CrystalReports_Lab1.Form1  GenerateReport_btn_Click(object sender, EventArgs e)

namespace CrystalReports_Lab1
{
    public partial class Form1 : Form
    {
        CrystalReport1 CR;

        public Form1()
        {
            InitializeComponent();
        }

        private void Form1_Load(object sender, EventArgs e)
        {
            CR = new CrystalReport1();
        }

        private void GenerateReport_btn_Click(object sender, EventArgs e)
        {
            crystalReportViewer1.ReportSource = CR;
        }
    }
}
```

Form1

Generate Report

SAP CRYSTAL REPORTS®

Main Report

Category Name

Action

Film Title

Men in Black 3

Actor Name

George Clooney

Will Smith

Category Name

Adventure

Film Title

The Twilight Saga: Breaking Dawn

Actor Name

Kristen Stewart

Robert Pattinson

Taylor Lautner

The Twilight Saga: Eclipse

Category Name

Animation

Film Title

Shrek Forever After

Actor Name

Eddie Murphy

Cameron Diaz

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Thank You