BEGINNING WEBFOCUS REPORT WRITING

AN INTRODUCTION TO USING AND BUILDING REPORTS WITH REPORT PAINTER IN DEVELOPER STUDIO

KNOW YOUR DATA

- ODS Reporting View Meta Data Reports

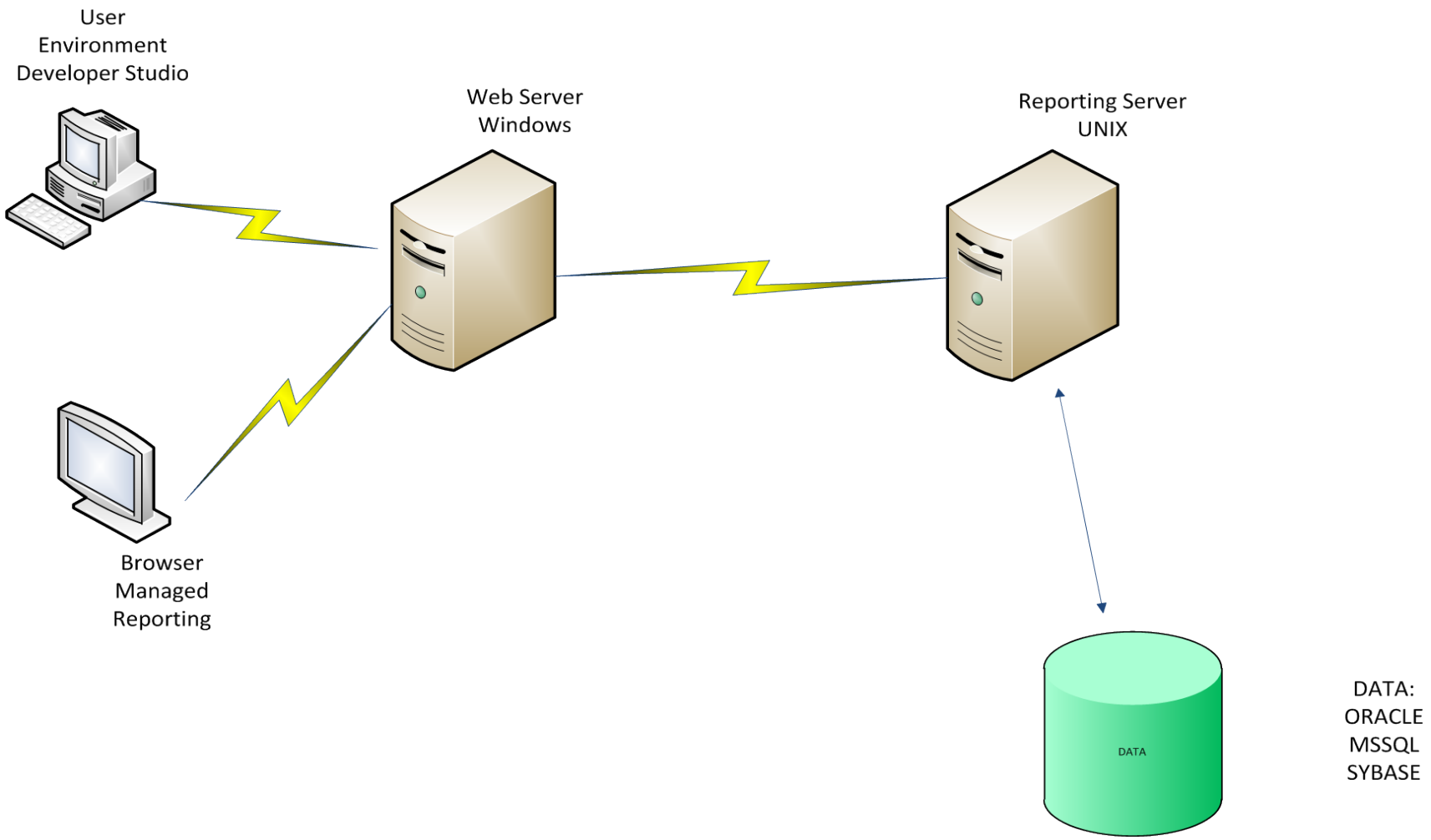
http://webits16/appstate.edu:9013/metadata/ODS_index.html

- Dynamic Help on the Banner Form

Course Outline

- Module 1: WebFocus Components
- Module 2: Adding a WebFocus Environment
- Module 3: Working with Report Painter
- Module 4: Using WHERE
- Module 5: Selecting on Summed Values and using variables
- Module 6: JOIN concepts and Execution
- Module 7: Using DEFINE and COMPUTE
- Module 8: Performing Specialized Operations
- Module 9: Incorporating Styling in Reports
- Module 10: Working with HOLD Files
- Module 11: Organizing Report Data – BY, ACROSS, UNDERLINE, RANK, TOC
- Module 12: FUNCTIONS & Features

1. WebFOCUS Components



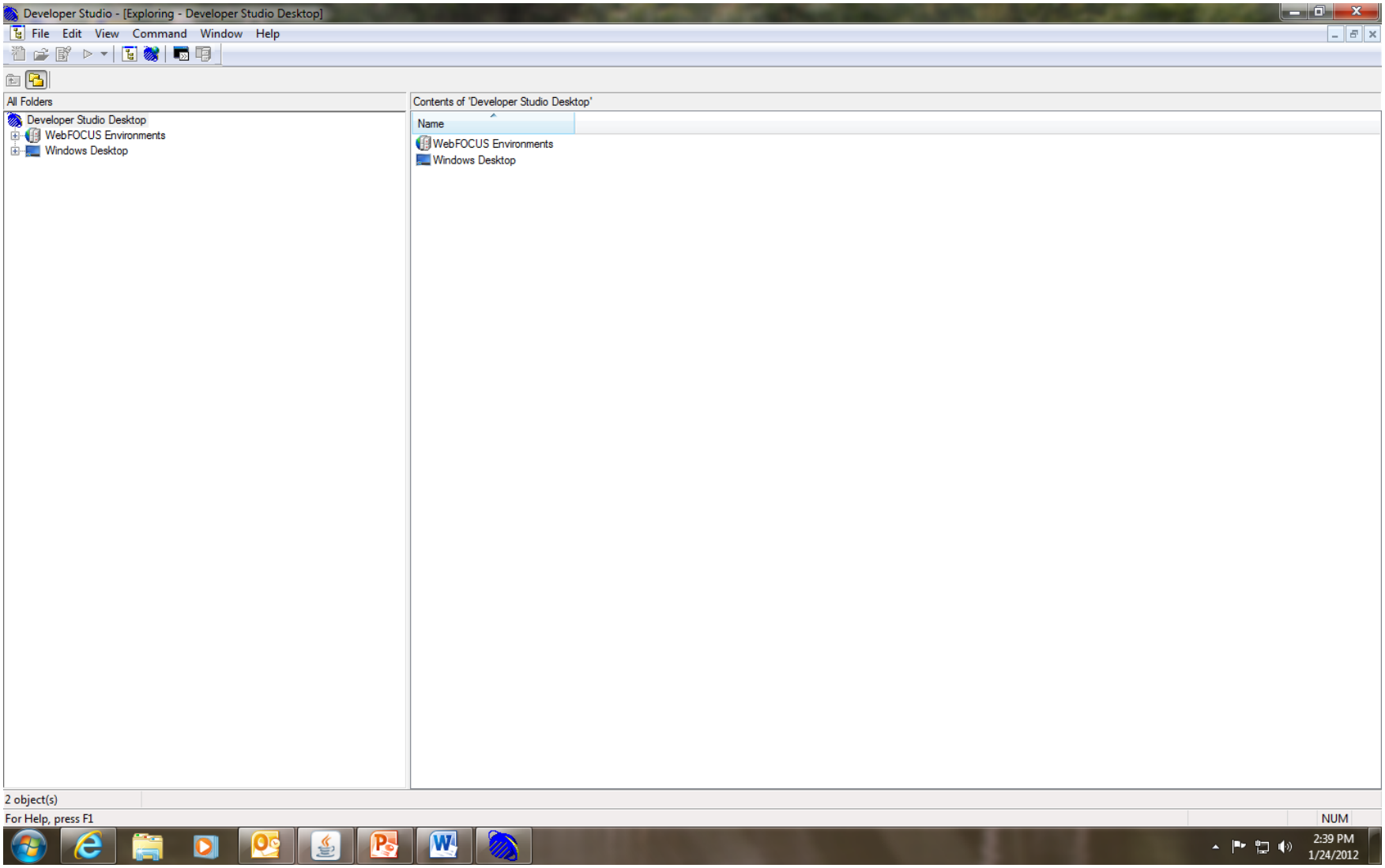
Exercise 1

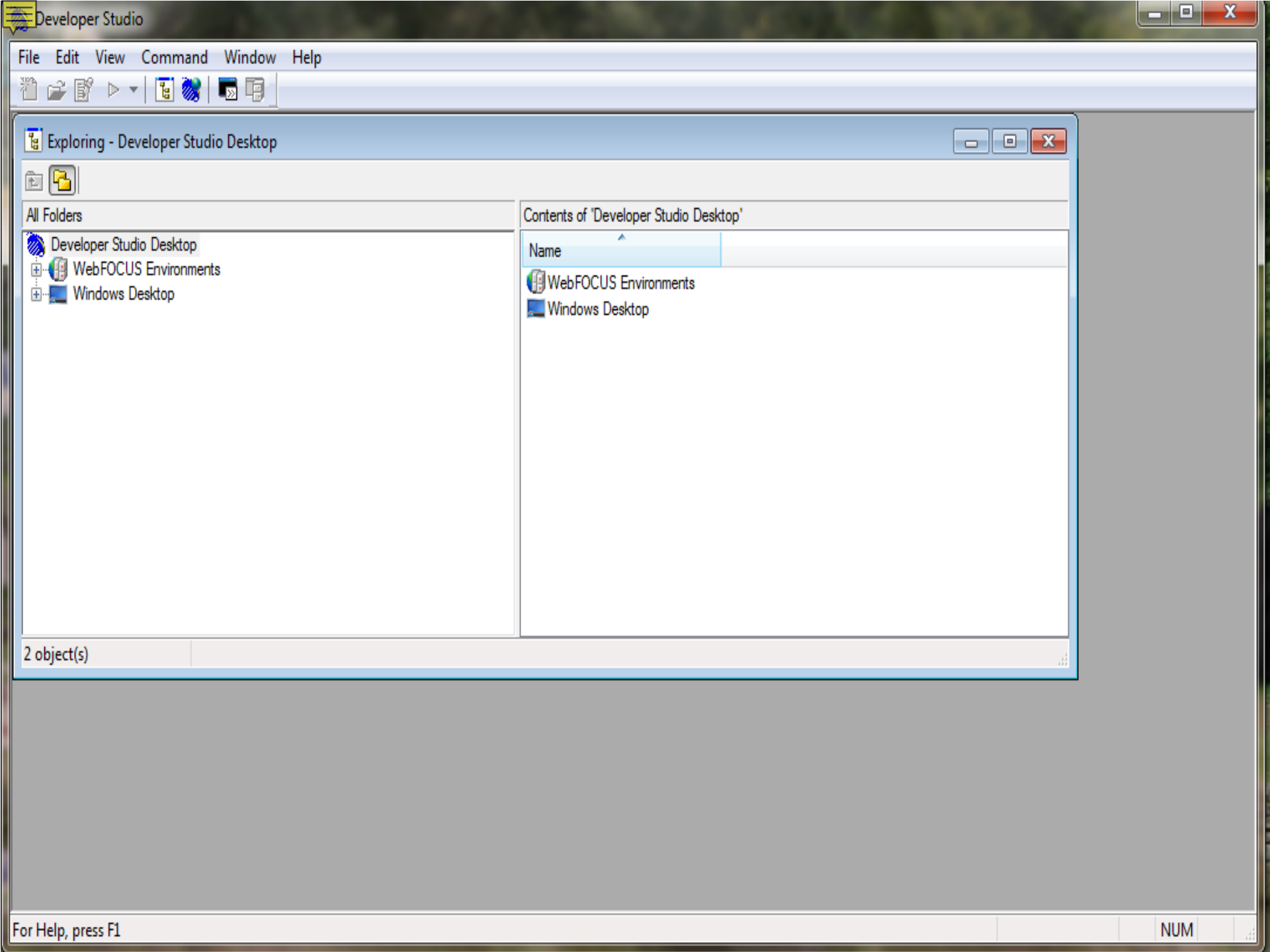
- Double click the Developer Studio Icon on your Desktop

Or

- Click the start button, select all programs, Information Builders, WebFOCUS 77 Developer Studio. WebFOCUS Developer Studio.

The Application Explorer



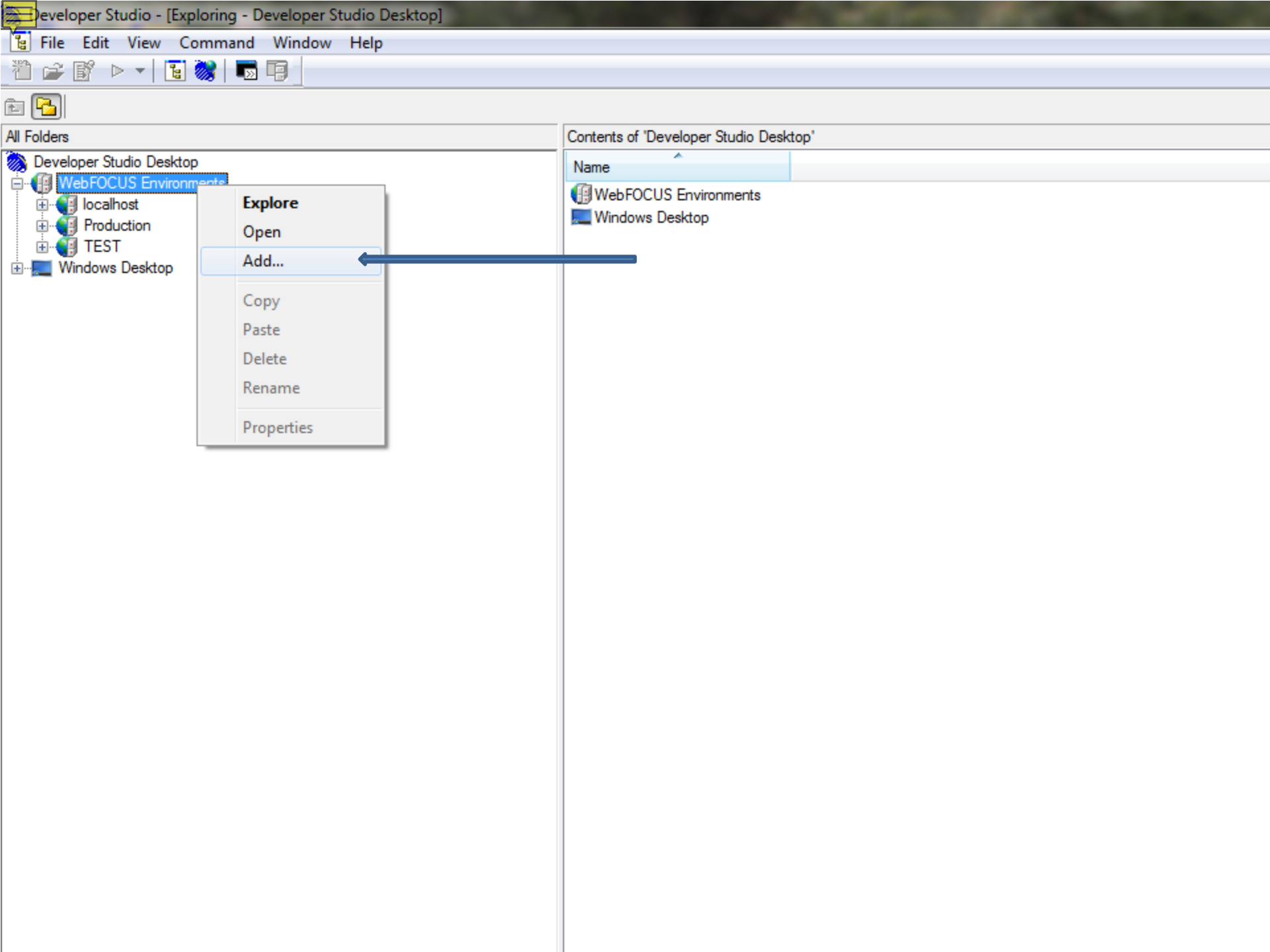

Developer Studio
File Edit View Command Window Help
Exploring - Developer Studio Desktop
All Folders
Developer Studio Desktop
WebFOCUS Environments
Windows Desktop
Contents of 'Developer Studio Desktop'
Name
WebFOCUS Environments
Windows Desktop
2 object(s)
For Help, press F1
NUM

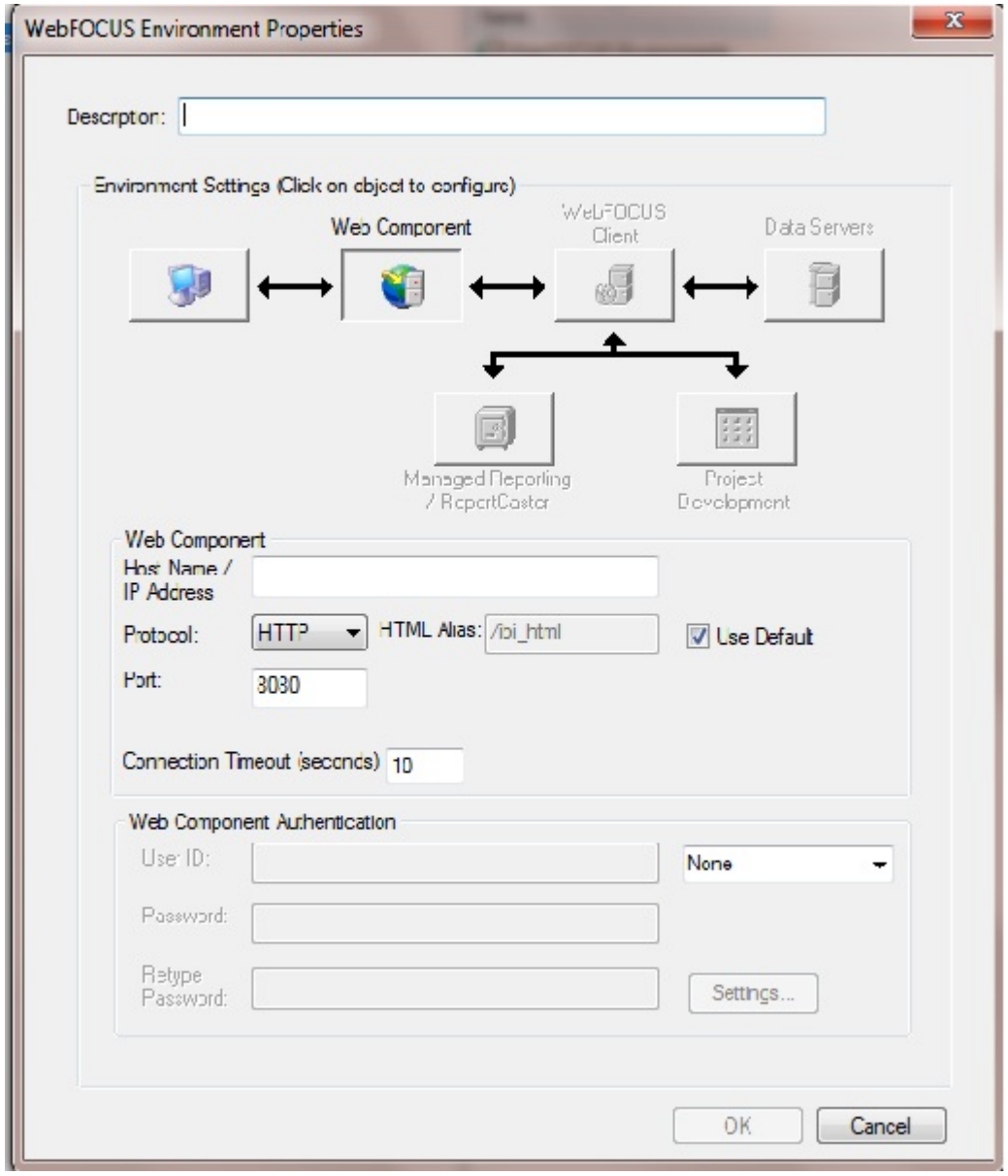
2. Adding a WebFOCUS Environment

- The WebFOCUS environments component contains the WebFOCUS server environments that are accessible and have been configured to Developer Studio.
- WebFOCUS environments can be added through the application explorer in Developer Studio.

Exercise 2:

- Add the TEST WebFOCUS Environment to your WebFOCUS Environments.

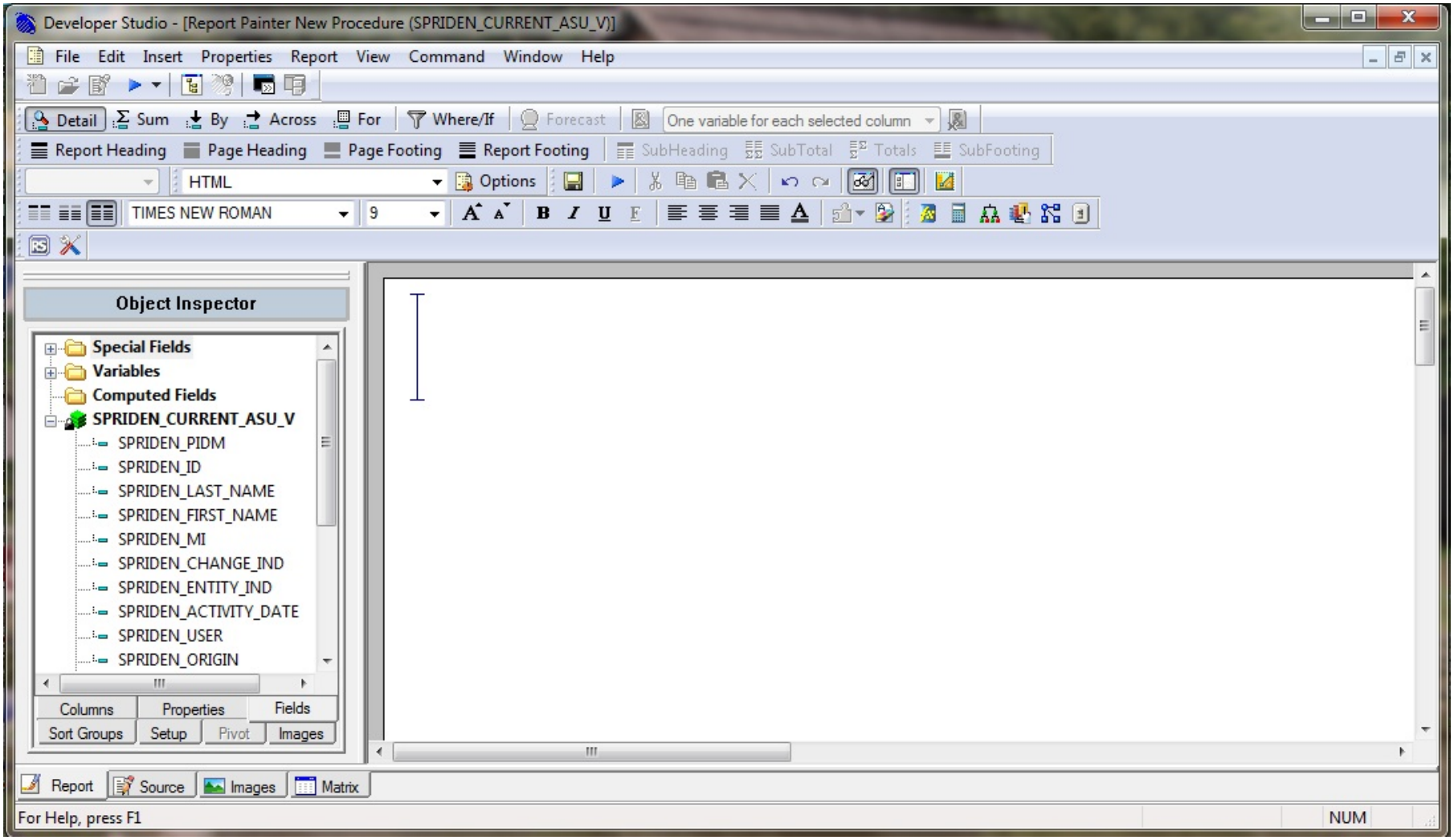

Developer Studio - [Exploring - Developer Studio Desktop]
File Edit View Command Window Help
All Folders
Developer Studio Desktop
WebFOCUS Environments
localhost
Production
TEST
Windows Desktop
Explore
Open
Add...
Copy
Paste
Delete
Rename
Properties
Contents of 'Developer Studio Desktop'
Name
WebFOCUS Environments
Windows Desktop


WebFOCUS Environment Properties
Descriptor:
Environment Settings (Click on object to configure)
Web Component
WebFOCUS Client
Data Servers
Managed Reporting / ReportCaster
Project Development
Web Component
Host Name / IP Address
Protocol:
HTTP
HTML Alias:
/ibi_html
Use Default
Port:
8080
Connection Timeout (seconds)
10
Web Component Authentication
User ID:
None
Password:
Retype Password:
Settings...
OK
Cancel

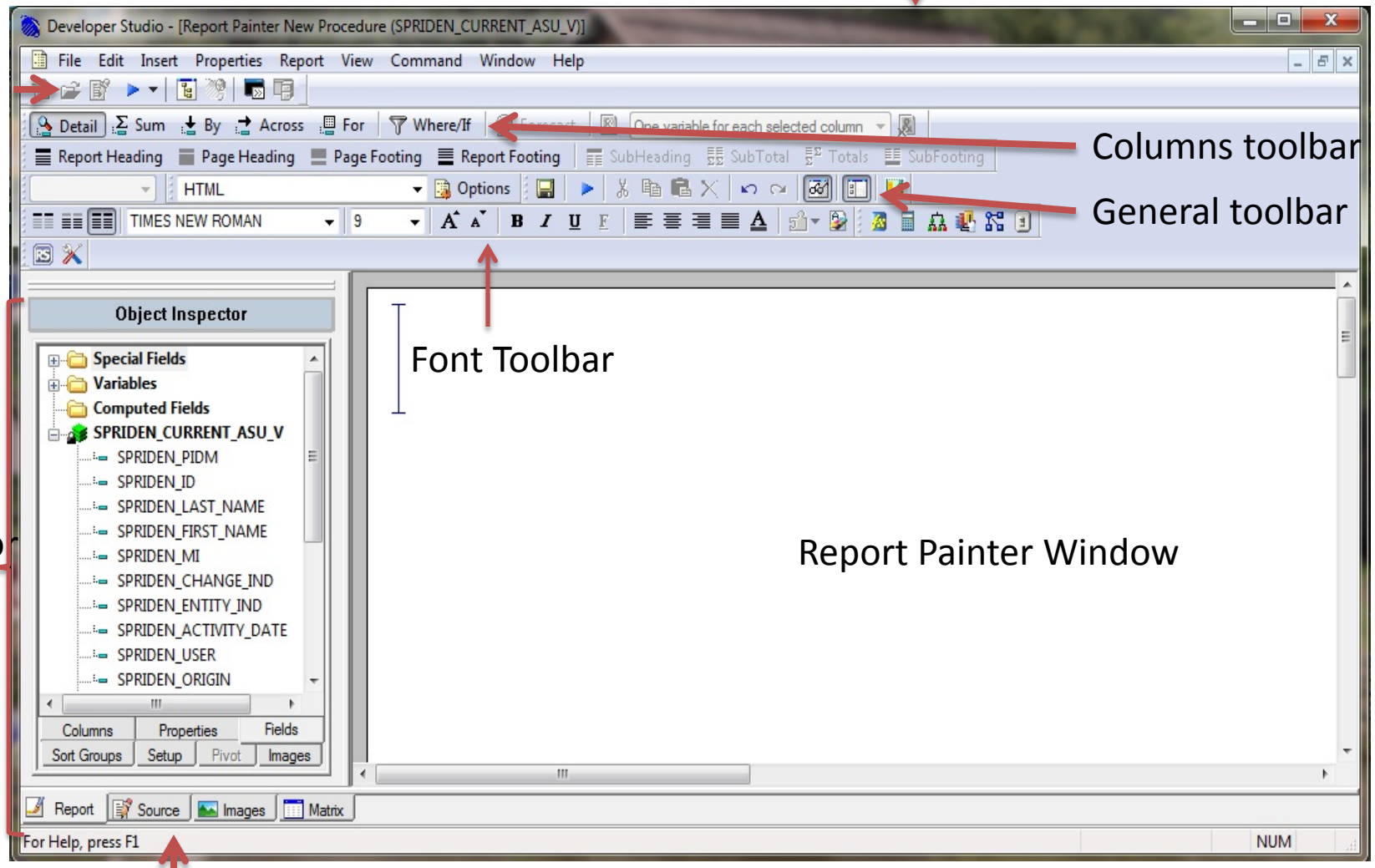
Exercise 2

Module 3
Working with Report Painter

- The Report Painter provides many powerful reporting features that enable you to create and style reports.
- The most prominent of these features is the ability to graphically paint a report on the Report Painter window. Which displays the actual report page and what it looks like as you build your report.


Developer Studio - [Report Painter New Procedure (SPRIDEN_CURRENT_ASU_V)]
File Edit Insert Properties Report View Command Window Help
Detail Sum By Across For Where/If Forecast One variable for each selected column
Report Heading Page Heading Page Footing Report Footing SubHeading SubTotal Totals SubFooting
HTML Options
TIMES NEW ROMAN 9
Object Inspector
Special Fields
Variables
Computed Fields
SPRIDEN_CURRENT_ASU_V
SPRIDEN_PIDM
SPRIDEN_ID
SPRIDEN_LAST_NAME
SPRIDEN_FIRST_NAME
SPRIDEN_MI
SPRIDEN_CHANGE_IND
SPRIDEN_ENTITY_IND
SPRIDEN_ACTIVITY_DATE
SPRIDEN_USER
SPRIDEN_ORIGIN
Columns Properties Fields
Sort Groups Setup Pivot Images
Report Source Images Matrix
For Help, press F1
NUM

The Report Painter Layout



Exercise 3.1

In this exercise you will create your folder in the class domain and create a simple report

SORTING

- Sorting enables you to display the report information grouped in a particular order. This way information can be organized by rows or columns.
- WebFOCUS Sorting options include:
- BY—for sorting rows
- ACROSS—for sorting columns.
- BY and ACROSS together—for creating a cross tabulation report.

- Sorting is available through the Columns Toolbar

Exercise 3.2

- Sorting your report
- Page Headings and Footings
- Change a column heading

Exercise 3.3

- SUM
- SET

Module 4

- WHERE

- Record Selection Tests may include:
- 1. Testing for NULL values
- 2. Testing for a range of values
- 3. Testing for certain values in a field

WebFOCUS provides several selection options:

WHERE

IF

WHERE TOTAL

RETRIEVAL LIMITS

Processing Sequence of Selection

- WHERE or IF : Data is evaluated as it is retrieved.

- WHERE TOTAL: Data is selected at the internal table level after all the data has been retrieved.

3 Phases of Processing a selection

Phase 1 – Analyze and Parse the request.

Phase 2 – Build internal table

- a. Selection of real data (where)
- b. Selection on Virtual fields (where or define)

Phase 3 – Process internal table

- a. Select on internal table records (where total)

Exercise 4.1 WHERE

Using Masking with WHERE

- WHERE can accommodate the use of a masking character ($) accompanied by a wildcard (*) when performing a selection on part of an alpha numeric field.

- WHERE last_name EQ ‘Atk$*’
- WHERE last_name EQ ‘Atk$$$$$$$$’
- WHERE last_name LIKE ‘Atk%’
- WHERE last_name LIKE ‘Atk_’
- IF last_name EQ ‘Atk$*’

Exercise 4.2 Masking

Compound Where Statements

- The WHERE statement supports the use of compound nested conditions.

- A single WHERE statement can be comprised of multiple combinations of selection statements.

Exercise 4.3 Compound WHERE

Numeric field selection

- Selection can be performed on numeric fields
- Minus sign and decimal point are allowed
- Don’t use a dollar sign or a comma
- Do not use LIKE or NOT LIKE
- Only a single value may be specified when using :

  > greater than

  >= greater than or equal

  < less than

  <= less than or equal

Exercise 4.4 Numeric Selection

Module 5
Selecting on Summed values and using parameters

SET EMPTYREPORT

- ON – generates an empty report with headings, footings, and column headings displayed.
- OFF – This is the default. Does not generate an empty report

Exercise 5.1
SET EMPTYREPORT

WHERE TOTAL

- Records can be selected based on the sum or average of a fields value
- An expression using WHERE TOTAL can be written the same way expressions are written in a WHERE statement

- Any Fieldname referred to in a WHERE TOTAL is the sum or average of the field.

- Use the WHERE TOTAL to select data after it has been sorted and summed or averaged.

Exercise 5.2
WHERE TOTAL

Using Parameters

- Static List
- Dynamic List
- Accept List from file

5 options for the variable type

- Single Select
- Multiselect OR
- Multiselect AND
- Range
- Simple

Exercise 5.3
Creating Parameters

Module 6
JOINS

- A join is a temporary virtual connection between two or more physical data sources that share at least one common field.

Types of JOINS

- Single
- Outer

Exercise 6.1
Inner JOIN

Exercise 6.2
Left Outer JOIN

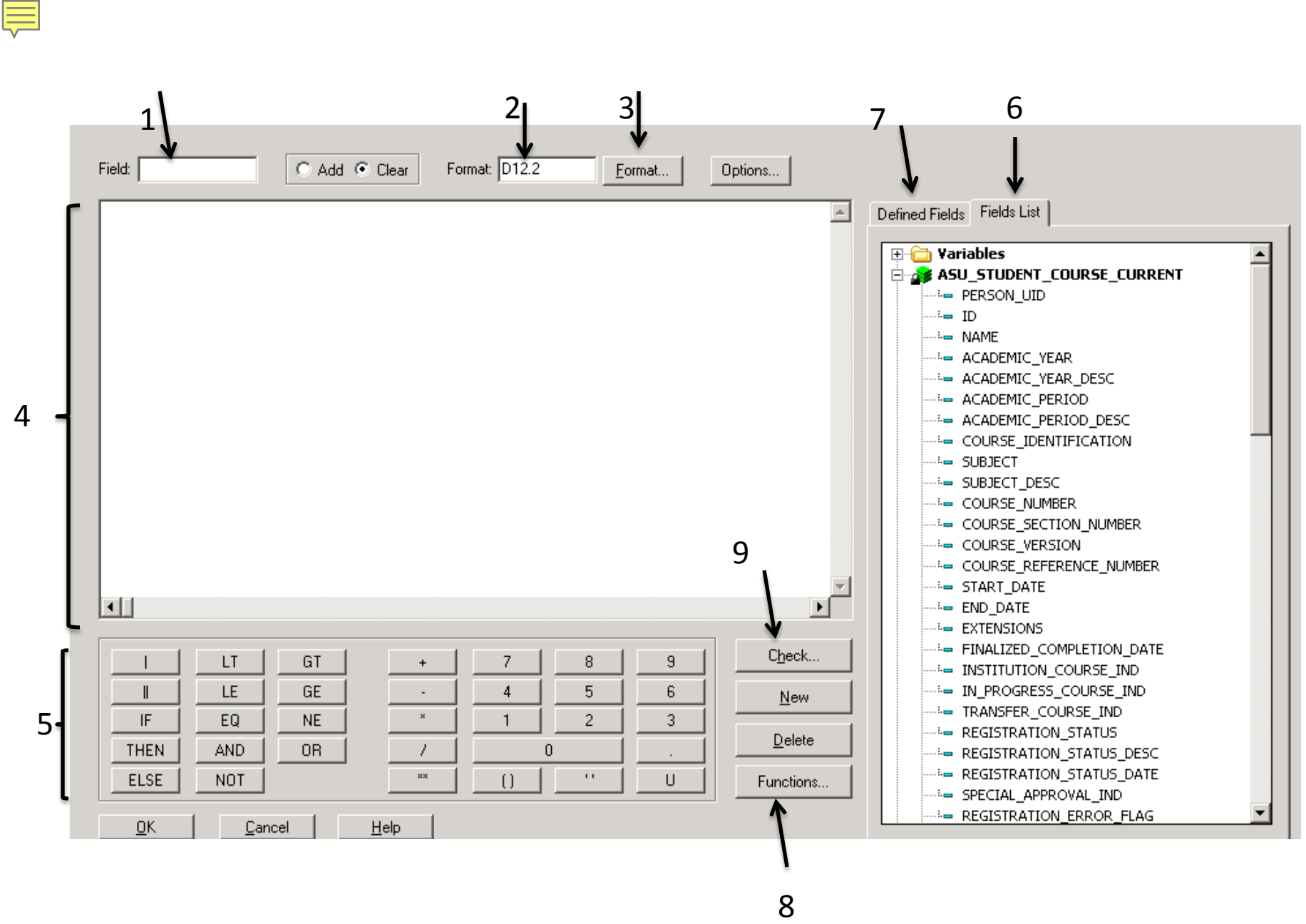
Module 7
Using DEFINE and COMPUTE

Two categories of temporary fields

- A virtual field (DEFINE) – based on the data source values. The values are not stored in the data source
- A calculated column (COMPUTE) – based on internal tables values. Created within the report itself and automatically inserted as a column in the report.

The DEFINE Tool

- The define tool provides a graphical way in which temporary fields (DEFINES) can be created for use in reports.


1
2
3
4
5
6
7
8
9
Field:
Add
Clear
Format:
D12.2
Format...
Options...
Defined Fields
Fields List
Variables
ASU_STUDENT_COURSE_CURRENT
PERSON_UID
ID
NAME
ACADEMIC_YEAR
ACADEMIC_YEAR_DESC
ACADEMIC_PERIOD
ACADEMIC_PERIOD_DESC
COURSE_IDENTIFICATION
SUBJECT
SUBJECT_DESC
COURSE_NUMBER
COURSE_SECTION_NUMBER
COURSE_VERSION
COURSE_REFERENCE_NUMBER
START_DATE
END_DATE
EXTENSIONS
FINALIZED_COMPLETION_DATE
INSTITUTION_COURSE_IND
IN_PROGRESS_COURSE_IND
TRANSFER_COURSE_IND
REGISTRATION_STATUS
REGISTRATION_STATUS_DESC
REGISTRATION_STATUS_DATE
SPECIAL_APPROVAL_IND
REGISTRATION_ERROR_FLAG
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LT
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Check...
New
Delete
Functions...
OK
Cancel
Help

Exercise 7.1
DEFINE

EDIT

- The EDIT function is used to change the way a fields values are displayed in a report.
- There are 2 EDIT Functions:
    a. EDIT – used to convert an alpha field to a numeric or a numeric to an alpha.
    b. EDIT – used to extract characters from or add characters to an alphanumeric field.

Exercise 7.2
EDIT

HDATE

- The HDATE function converts the format of a date field to the standard MDYY.

Exercise 7.3
HDATE

COMPUTE

- COMPUTE is evaluated at the report level after all the data is retrieved, summed, and sorted.
- It is created within the report itself and automatically listed as a column in the report
- It CANNOT be used as a primary sort field

Exercise 7.4
COMPUTE

Module 8:
Performing Specialized Operations

- PREFIX Operators are mathematical functions that are added to a fieldname in a verb phrase.

    a. Can only be applied to a column field

    b. CANNOT be applied to sort field.

Each PREFIX operator is applied to a single field and only affects that field.

PREFIX OPERATORS

OPERATOR	FUNCTION
CNT	Count the number of values for a field
CNT.DST	Count unique occurrences of field values in a sort group
SUM	Add the values of a field
AVE	Calculate the average(mean) value for a field
MIN	Identify the lowest value of a field
MAX	Identify the highest value of a field
ASQ	Compute the average sum of the squares for standard deviation in statistical analysis
ST	Provide the subtotal for a sort group in section headings and footings
TOT	Provide the grand total of a field (used primarily in page headings and footings
PCT	Calculate the percentage of a column value to the column total
RPCT	Determine the percentage of a column value to the row total
PCT.CNT	Calculate the percentage of a count to the total count
FST	Select the first instance of a field
LST	Select the last instance of a field

Exercise 8.1
COUNT

Module 9:
Incorporating Styling in Reports

- Styling Options include:

  a. Change Text colors

  b. Change font type, styles, and size

  c. Assign background colors

  d. Justification – left, right, and center

  e. Adding or removing grids

  f. Changing output type

Exercise 9.1
Styling and Output

Visualizing a Report

- Visual representations are in the form of vertical or horizontal bar graphs that make relationships and trends among data more obvious.
- Apply to numeric report rows or columns only.
- The length of the bar graph is proportional to the magnitude of it associated value
- The shortest bar graph is displayed for the minimum value , the longest for the maximum value.

Exercise 9.2
Visualize

Drill Down Reports

- Drill-down reports encompass a parent report that is linked to a child report.
  a. Values in a field or fields of a parent report act as hyperlinks in a web page.
  b. When a value is selected from the parent report the child report is executed and displayed.

Exercise 9.3
Drill-Down

MODULE 10:
Working with HOLD Files

- Reasons for creating a HOLD file:

  1. Data Extraction: retrieve and process data, then save the results for further processing.

  2. Data Transformation: specify formats for displaying or processing report output files in the other software applications.

When should you create a HOLD file?

- When sorting on a field after it has been summed.
- To extract a subset of the original data source to generate multi-step reports.
- To assist selection criteria (WHERE)
- To send to another location

When should you avoid creating a HOLD file?

- When the output required can be created in one pass of the data.
- When temporary space is at a premium.

- Identifying the output file type desired
- Choosing a name for the output file. (the default name is HOLD) I suggest using HOLD_ something meaningful.
- Selecting a format type

Exercise 10.1
Create a HOLD File

Exercise 10.2
Change report output

Module 11
Organizing Report Data

- Any field can be a sort field
- Several fields can be selected as sort fields producing a nesting effect.

Sorting options

- BY – for sorting rows – can be used on alphanumeric or numeric fields.
- ACROSS – for sorting columns – maximum of 5
- BY and ACROSS together – for creating a matrix report

ACROSS

- Control the order – ascending or descending
- Choose the number of records to display
- Add underlines, blank lines, and page breaks
- Reset the page number
- Group numeric data into ranges
- Rank numeric data

Exercise 11.1
By, Across and Underline

RANK

- RANK is available as an option for a sort field to indicate the numeric rank of each row.

- A column named RANK is automatically created

Exercise 11.2
RANK

TOC
Table of Contents

- Report must contain a least one BY field
- This feature is controlled with a page break
- Only available for HTML output
- For multiple sort fields, the hierarchy is determined by the order of the sort fields.

Options for Table of Contents

- In the Heading of a report
- In the Report itself

Exercise 11.3
TOC

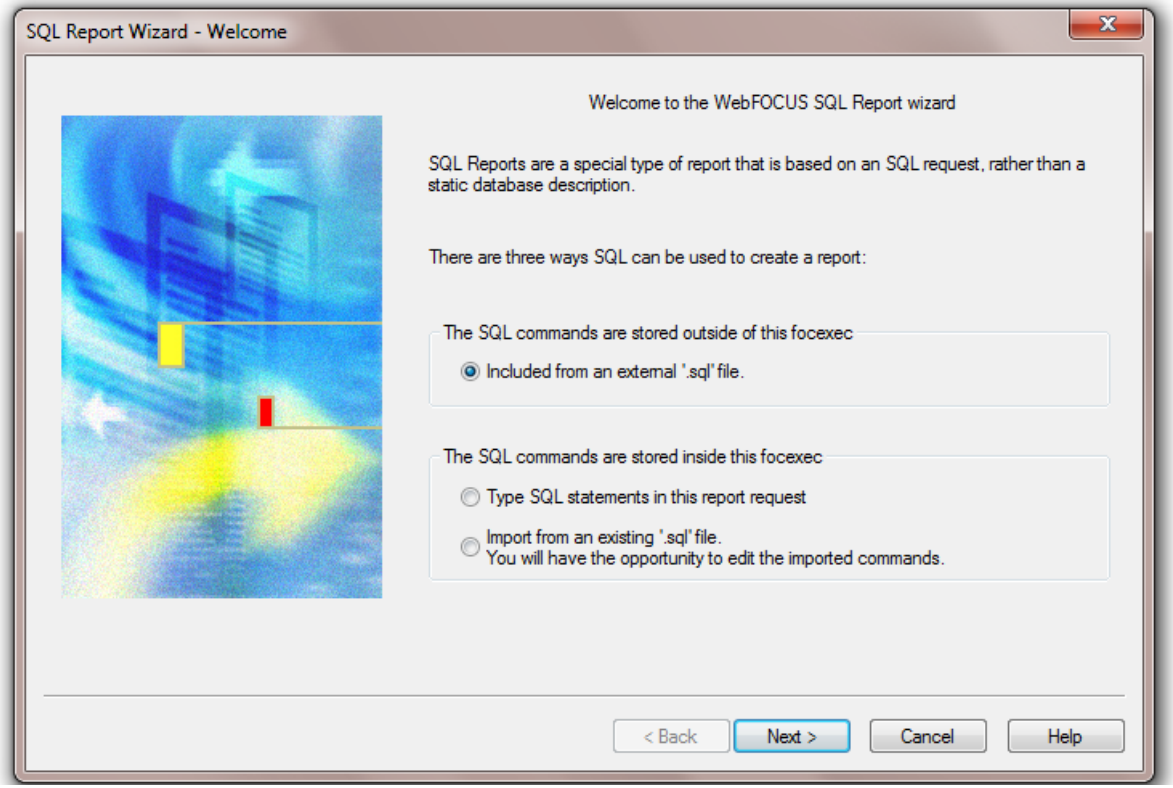
Module 12
FUNCTIONS & FEATURES

Some commonly used Functions

- EDIT
- HDATE
- SUBSTRNG
- LCWORD
- TODAY

Exercise 12.1
Review Functions

SQL Report Wizard



Exercise 12.2
SQL Report Wizard