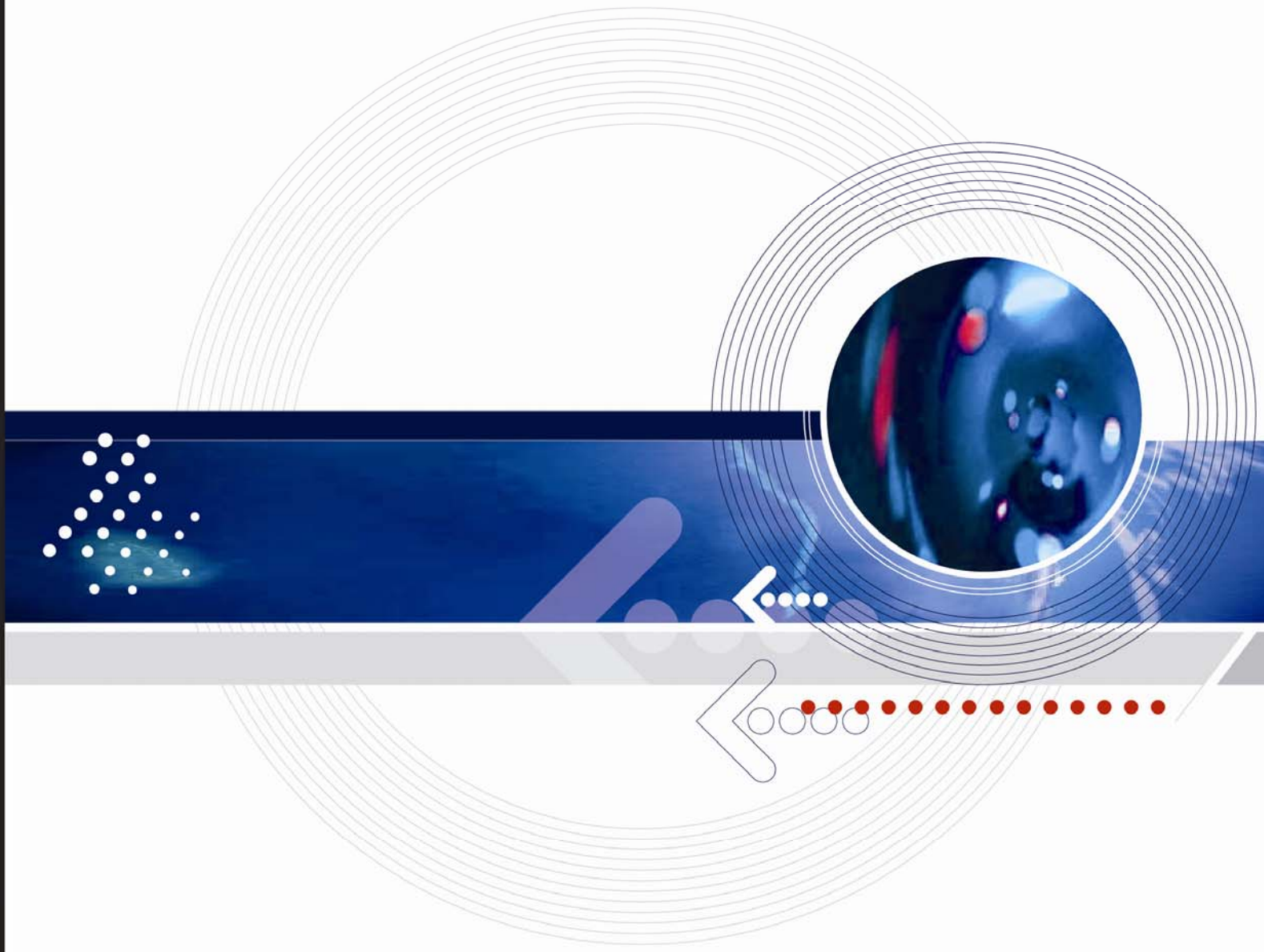
IDEA
Data Analysis Software



CASE STUDY FOR IDEA

IDEA VERSION EIGHT

The Case Study for IDEA was originally developed by BDO Seidman LLP, edited by Dr. Jerry L. Turner of the University of Memphis and revised by Audimation Services Inc., 1250 Wood Branch Park Drive, Suite 480, Houston, Texas 77079 Telephone: 888-641-2800; info@audimation.com; www.audimation.com

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Overview

IDEA® Data Analysis Software is a powerful and user-friendly tool designed to help accounting, financial and systems professionals extend their auditing capabilities, detect fraud and meet documentation standards. IDEA allows you to quickly import, join, analyze, sample, and extract data from almost any source, including reports printed to a text or PDF file.

IDEA combines considerable analysis power with an extremely user-friendly Windows environment. This versatile tool is useful for any type of file interrogation and offers users the benefits of the following and other functionality:

- Import data from a wide range of file types
- Create custom views of the data and reports
- Perform analyses of data, including calculation of comprehensive statistics, gap detection, duplicate detection, summaries, and aging
- Perform calculations
- Select samples using several sampling techniques
- Match or compare different files
- Create pivot tables for multi-dimensional analysis
- Automatically generate a complete history that documents the analysis
- Record, create, and edit macros with IDEAScript, a customizable VBA-compatible scripting tool
- Conduct exception testing of unusual or inconsistent items using simple or complex criteria
- Built-in @Functions to perform operations such as date, arithmetic, financial and statistical calculations, and text searches

This Case Study for IDEA is a three-part document that provides an introduction on importing data files, conducting various analyses, creating reports, and reviewing the History; provides additional 'problems' for you to test your IDEA skills; and lastly provides background information to allow you to plan and perform an inventory audit using IDEA.

Data files are provided and Part 1 will walk you through importing these files into IDEA.

Please note, the functionality covered in this case study does not cover the full functionality of IDEA, and the images may not necessarily reflect what you see on your screen depending on the IDEA product you are using. Additional tutorials may be found under Start > All Programs > IDEA > Documentation.

The purpose of the Case Study for IDEA is to:

- Educate participants about some of the basic functionality offered by IDEA
- Apply a working knowledge and understanding of IDEA
- Incorporate the use of IDEA into the audit process

Introduction to IDEA

Objective

Upon completion of Part I participants should have a basic understanding and working knowledge of how to import data into IDEA, index and age data, perform data extraction tasks, pull a stratified random sample, summarize data, join data, add fields to a file, and create custom reports.

Content

Part 1 includes the following exercises:

- Specify a Working Folder
- Importing Data
- Indexing, Aging, and Printing
- Stratified Random Sampling
- Summary Reporting
- Joining Databases
- Creating Virtual Fields (Append Field)
- Export from IDEA
- Microsoft® Word Mail Merge

The above exercises require the use of two data files (**Address.ASC**, **Arfile.ASC**) and a Microsoft Word Document (**Confword.doc**). These files are included in the Case Study for IDEA folder located on the IDEA Education License CD or can be downloaded from http://www.audimation.com under Resources > Self Study.

Results

After completing Part I, participants should print or generate the following:

- Age Analysis Report and Graph (Exercise 3)
- Accounts Receivable in Excess of 180 Days Report (Exercise 3)
- Numeric Stratification Report (Exercise 4)
- Explanation of Sample Population Differences (Exercise 4)
- AR Summary by Store Report (Exercise 5)
- Confirmation Control Report (Exercise 7)
- 1 of 49 Confirmation Letters (Exercise 9)

Exercise 1: Specify Working Folder

IDEA uses a **Working Folder** to organize and store databases. It is recommended that a separate **Working Folder** be used for each audit or project. All files imported and created in the course of your work will be stored in the **Working Folder** you create.

Use Windows Explorer and create a new folder called **Case Study for IDEA** under **C:\Documents and Settings\[UserID]\My Documents\IDEA**.
If you are using a Vista operating system, the path will be:
C:\Users\[UserID]\Documents\IDEA.
Copy the four **Case Study for IDEA** files into the **Case Study for IDEA** folder.

Note: the **Case Study for IDEA** files can be found from:

- IDEA Education License CD
- Audimation website, http://www.audimation.com, under Resources > Self Study

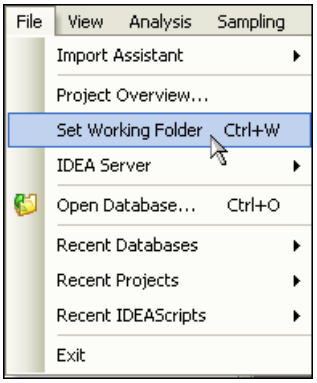
Launch the IDEA program by double clicking the **IDEA** icon 

on your desktop or by

selecting IDEA from the 

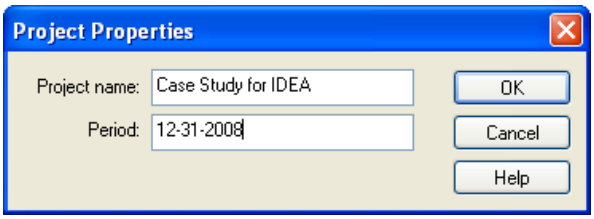
Programs menu.

Select **Set Working Folder** from the **File** menu options. Once a **Working Folder** is set, it remains the active folder until changed.

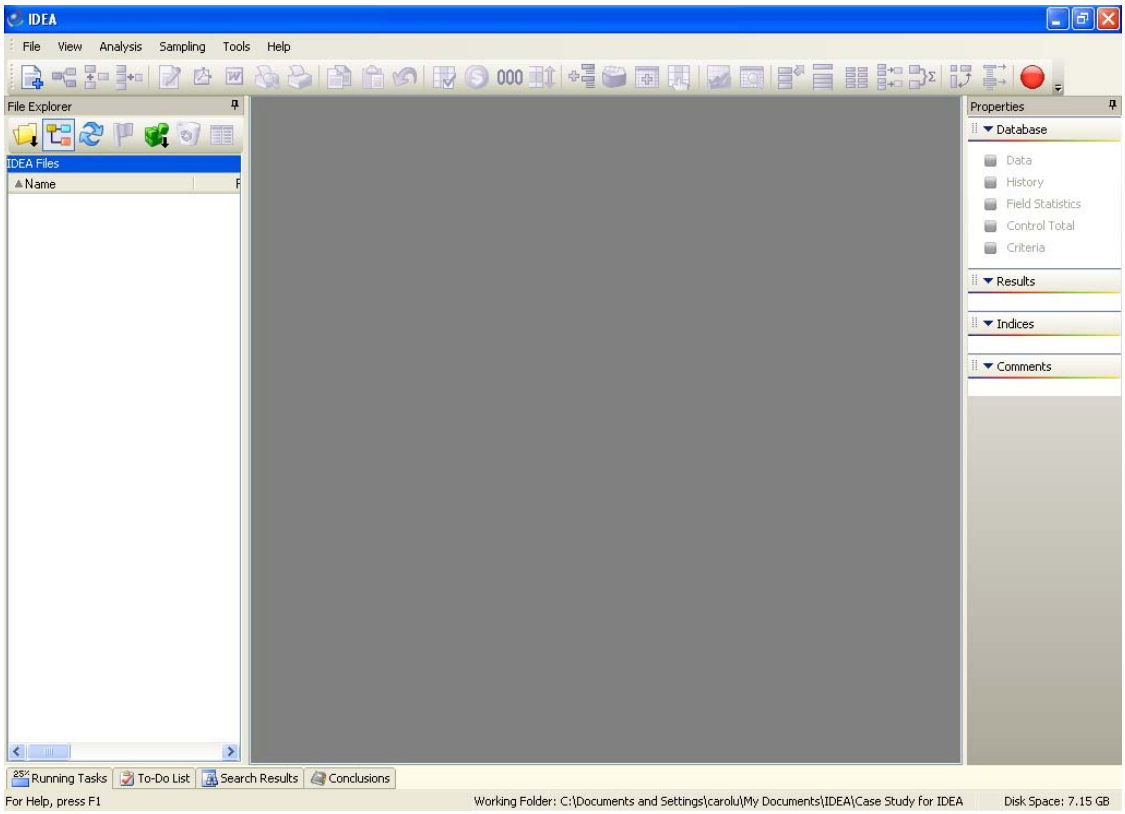


In the **Specify Working Folder** window, specify your working folder to be **C:\Documents and Settings\[UserID]\My Documents\IDEA\Case Study for IDEA** and click **Open**.

Enter the following information in the **Project Properties** window and click **OK**.



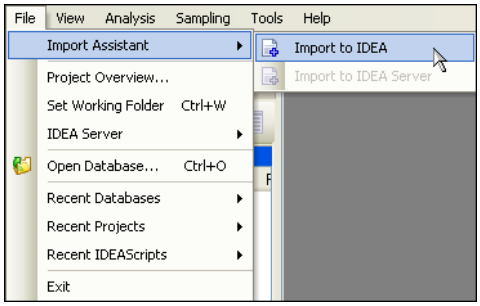
The following IDEA screen will appear.



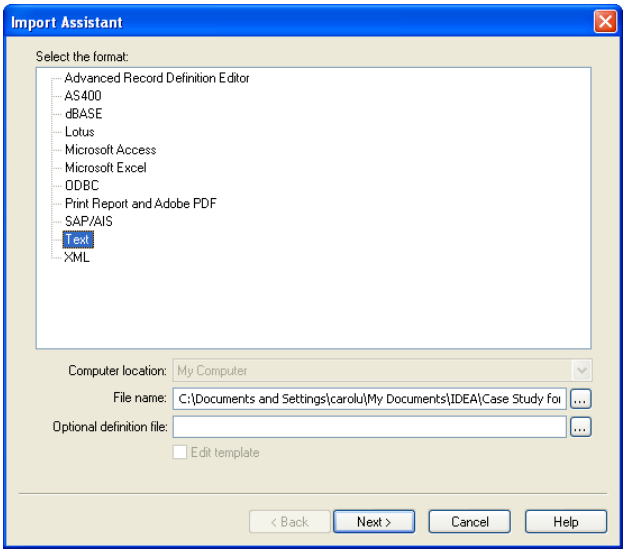
Exercise 2: Importing Data Into IDEA

Before a file can be analyzed, you must import the file into IDEA. You will use the **Import Assistant** to define two ASCII files. The name and address file is an ASCII fixed length file and the accounts receivable detail file is an ASCII delimited file. The two files were downloaded from the client's computer and were accompanied by their respective record layouts. These two files are named **Address.ASC** and **Arfile.ASC**.

First import **Address.ASC** using IDEA's **Import Assistant**. From the **File** menu, select **Import Assistant** and then **Import to IDEA**.



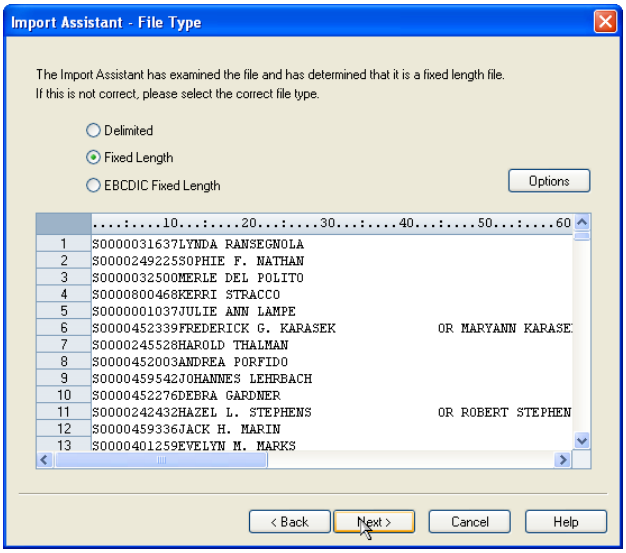
In the **Import Assistant** window make sure that **Text** is selected. IDEA can import a variety of file types, including Excel, Access, ASCII files, reports printed to a file, as well as PDF's.



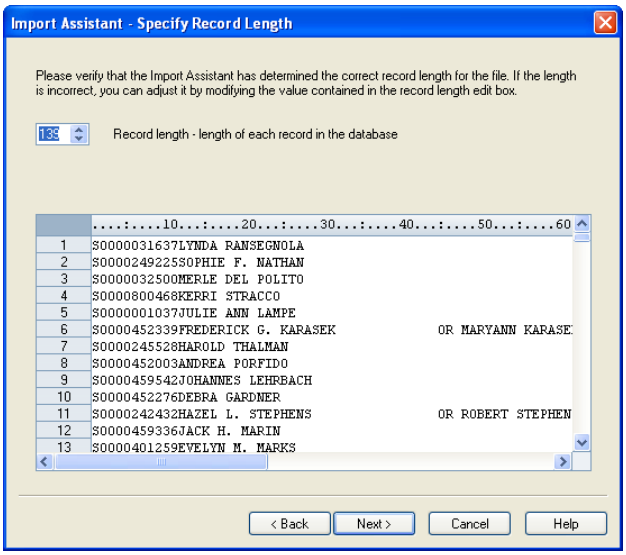
Click the  button on the right of the **File name:** field to select the **Address.ASC** file from your **Working Folder** and click **Open**.

Click **Next**.

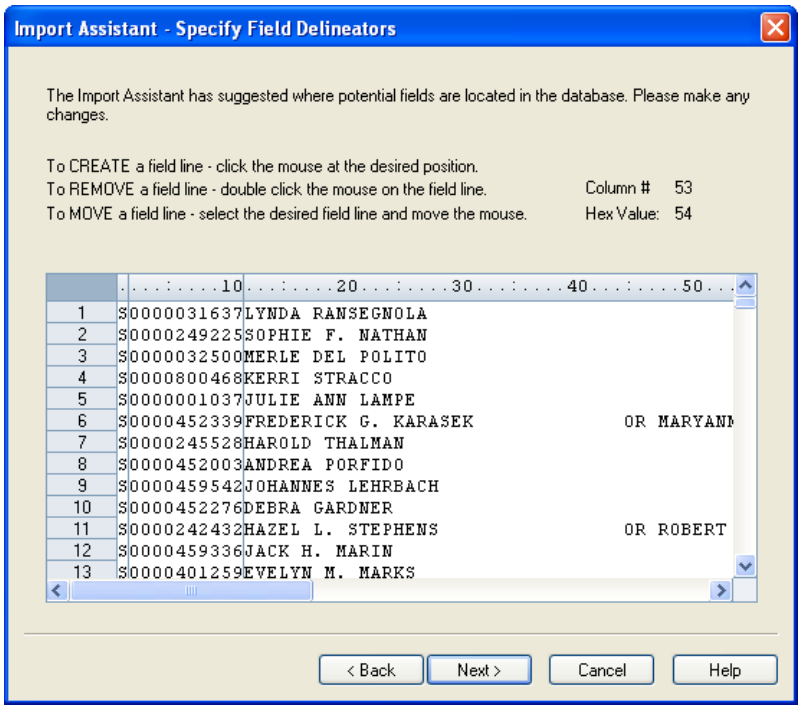
As indicated on the **Import Assistant - File Type** screen, the **Import Assistant** has properly determined that the file is **Fixed Length**.



Click **Next** to open the **Import Assistant - Specify Record Length** screen. On this screen, IDEA has determined that the length of each record in this file is **139**.



Click **Next** to open the **Import Assistant - Specify Field Delineators** screen which is used to specify the starting and ending position of each field within the records.



The **Import Assistant** inserted lines based on the pattern of data within the records. Lines should be added, moved or deleted to agree with the following record layout:

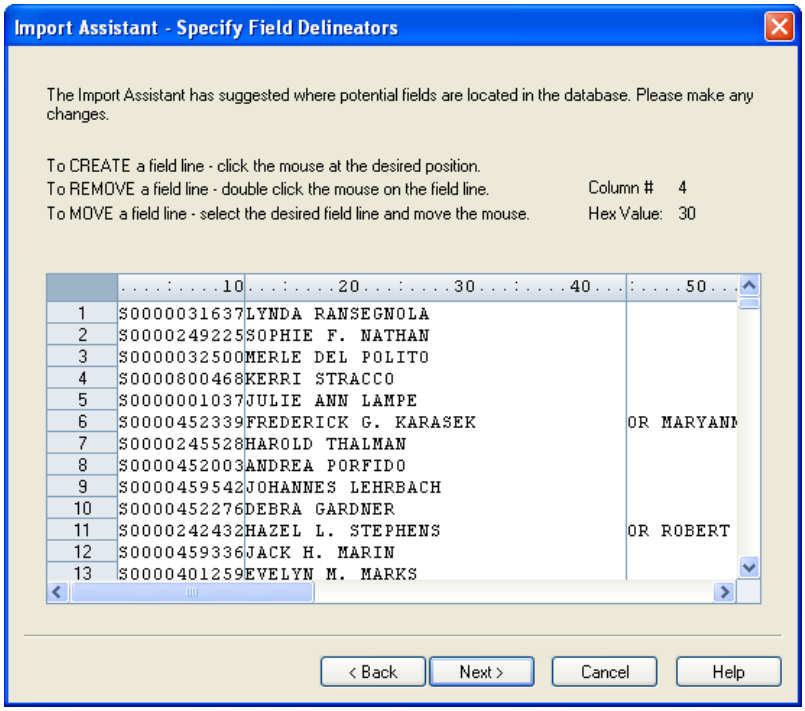
NAME and ADDRESS FILE RECORD LAYOUT

Field Name	Type	From	Length	Description
ACCOUNT	Character	1	11	Account Number
NAME1	Character	12	33	First Acct Owner
NAME2	Character	45	33	Second Acct Owner
STREET	Character	78	30	Street/PO Box
CITYST	Character	108	25	City & State
ZIP	Character	133	5	Zip Code

The vertical line positions can be modified by using the **CREATE**, **REMOVE** or **MOVE** functions described below:

To **CREATE** a field line	Click the mouse at the desired position
To **REMOVE** a field line	Double-click the mouse on the field line
To **MOVE** a field line	Select the desired field line and move the mouse

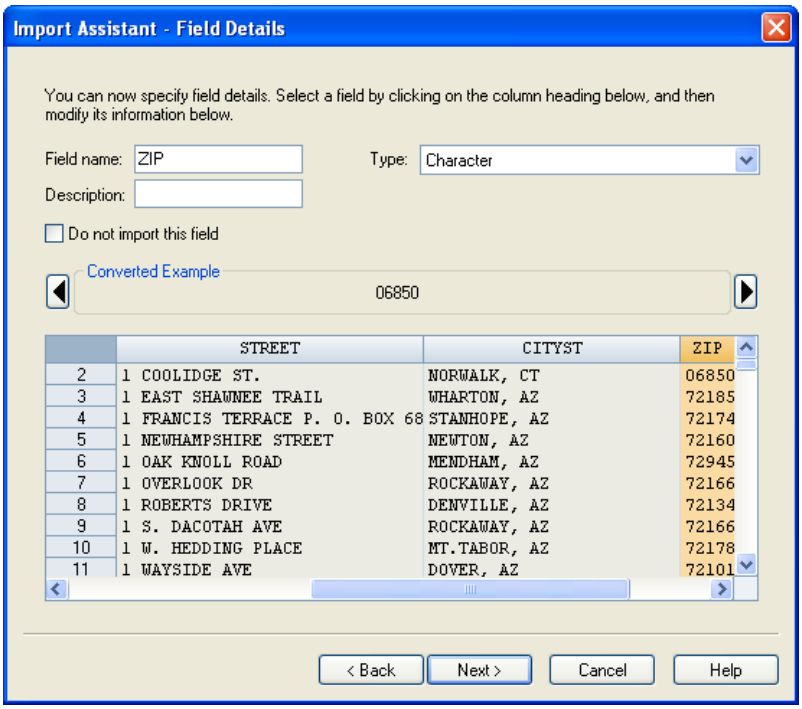
Your cursor must be in the data part of the screen, below the ruler and on the right side of the vertical line's position. The vertical field lines need to separate the fields in accordance with the preceding record layout as illustrated below.



Click **Next** to open the **Import Assistant - Field Details** screen.

The **Import Assistant - Field Details** screen allows you to specify a name and type setting (character, numeric, date, time) for each column. Use the record layout on the preceding page to assist you with these settings. The active column is highlighted in the data view window.

Click the data area to select the next column, or click on the arrows  to either side of the **Converted Example** area.



The **Field name:** and **Type:** are required for each column. The **Description:** field is optional. The field names you type in must be IDENTICAL to the record layout.

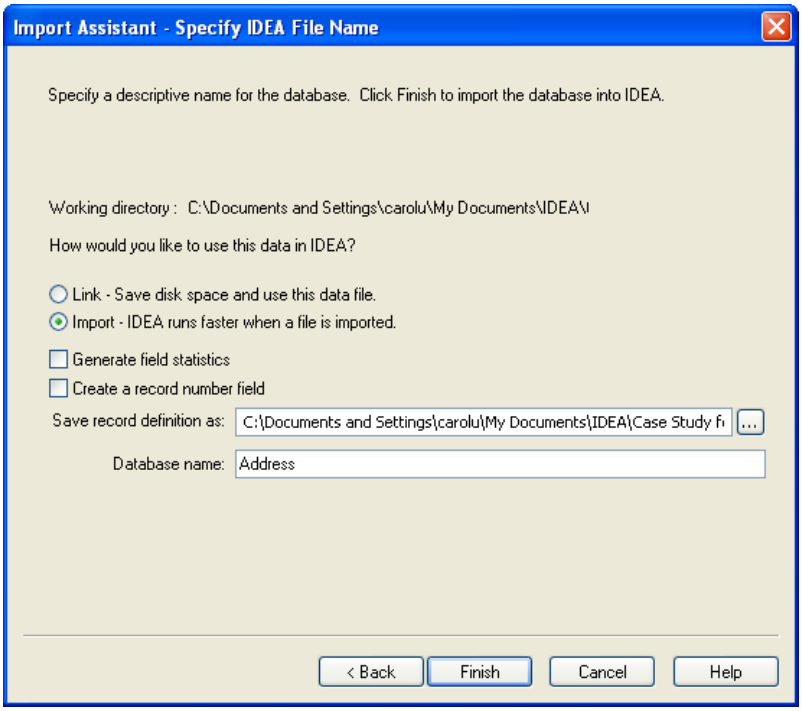
Change the **Zip** field to **Character** so that leading zeros are included for a proper mailing address.

Note that the converted value of the first record in the data area is displayed in the **Converted Example** area.

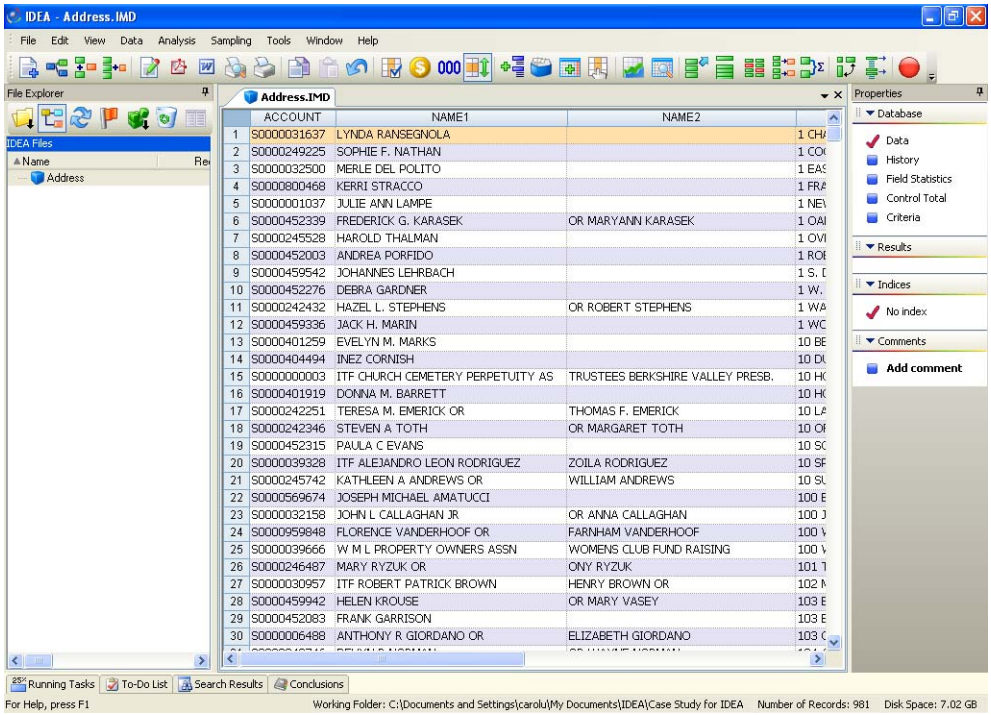
Click **Next** to open the **Import Assistant - Create Fields** screen. IDEA allows users to add virtual or editable fields to the imported file. This can be done during the import or at anytime while using IDEA. However, no fields will be added at this time.

Click **Next** to open the **Import Assistant - Import Criteria** screen. We will not be adding criteria to filter our import.

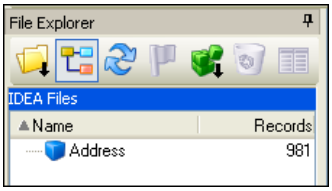
Click **Next** to open the **Import Assistant - Specify IDEA File Name** screen.



Accept the defaults for the **Database name:** and **Save record definition as:** fields. Accept the default to **Import** the database into IDEA. Click **Finish** and the data will be imported into the **Working Folder**, opened and displayed in the **Database** window as follows.

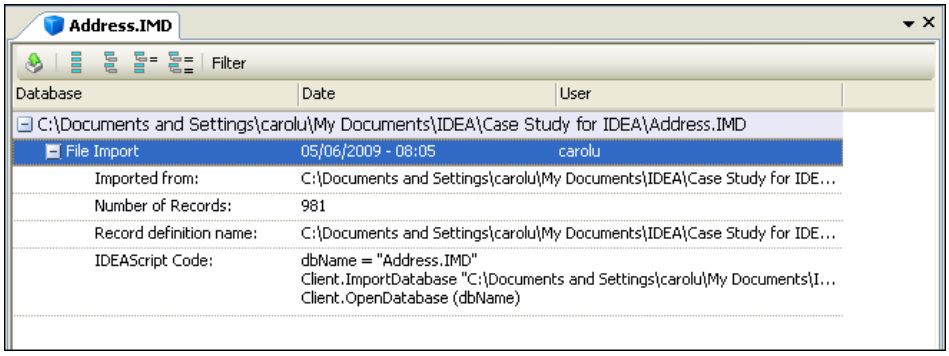


Note that the database name, **Address**, appears on the left side of the screen in the **File Explorer** window. The **File Explorer** window displays details of all the IDEA databases in the **Working Folder**. You can open a database by double clicking on the database name. You can delete a database by left clicking once on the database name to select it, and right mouse click to access the function, or by using the toolbar function located at the top of the **File Explorer** window. You can also rename a database using the right mouse click function, but the database must first be closed.



Note the **981** in the lower right hand corner of your screen (**Status** bar). This is the number of records in the IDEA database.

Click on **History** in the **Database** section of the **Properties** window. Click the **+** next to **File Import**. The history log shows that we imported 981 records and the date the processing took place. **History** maintains an audit trail or log of all operations carried out on a database. You can copy and paste the contents of **History** into any other Windows application such as Microsoft Word, or **Export** to a text file using the **Export** button  .



Click **Data** in the **Database** section of the **Properties** window to return to the database view.

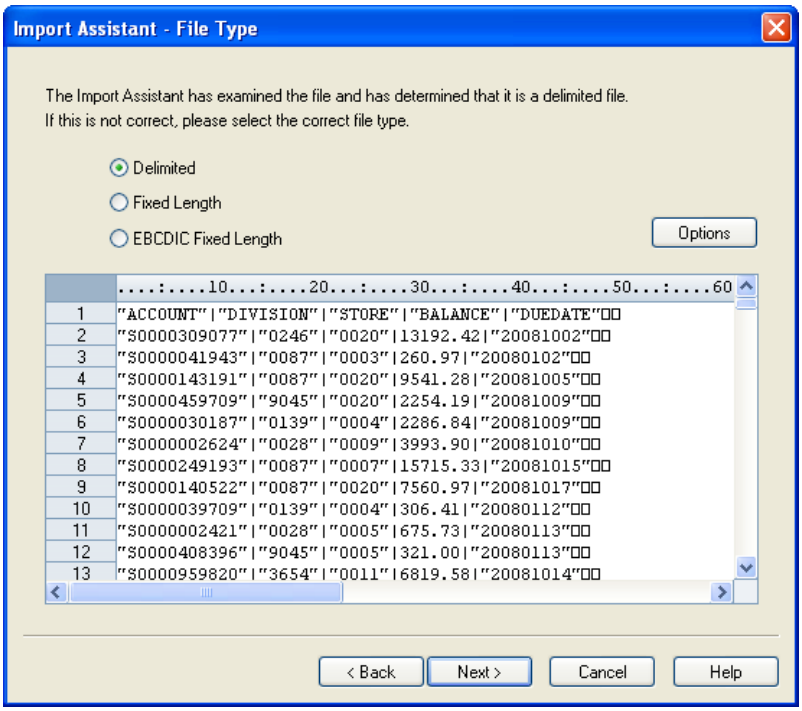
Close the **Address** database by clicking on the ✕ in the upper right hand corner of your database window or selecting **Close Database** from the **File** menu options.

Next we will import the accounts receivable detail file, **Arfile.ASC**. The steps are similar to those used to import the preceding address file.

Select **Import Assistant** and then **Import to IDEA** from the **File** menu options. In the **Import Assistant** window make sure that **Text** is selected. Select the data file to import, **Arfile.ASC**, from the **Case Study for IDEA** folder.

Click **Next**.

As indicated on the **Import Assistant - File Type** screen, the **Import Assistant** has properly determined that the file is **Delimited**.



ASCII delimited files are a common format of variable length file where each field is only long enough to contain the data stored within it. In order for software to use such data files, there is a separator (a special character) at the end of each field within the record. Additionally, text fields may be enclosed (encapsulated) with another character, typically " " (quotes). View the data and determine:

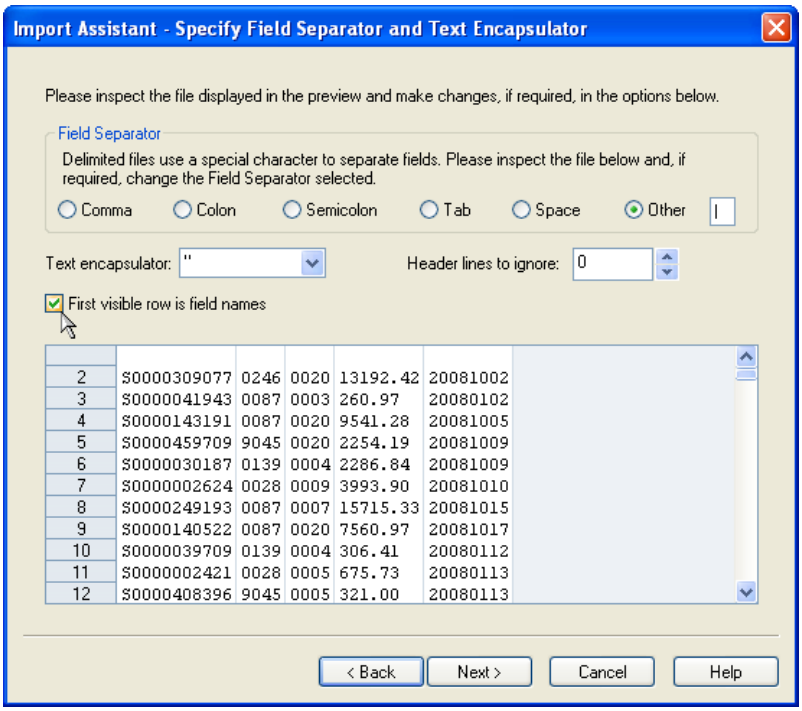
- The field separator
- Character field text encapsulator (if any)

Click **Next**.

The **Import Assistant - Specify Field Separator and Text Encapsulator** screen will be displayed. In this step, IDEA will determine what it believes the field separator and text encapsulator to be.

IDEA has determined the character used for the **Field Separator** and that quotation marks (**"**) were used as the **Text encapsulator:**.

This ASCII delimited file has field names as the first row of the file. To use these as field names, check the box **First visible row is field names**.



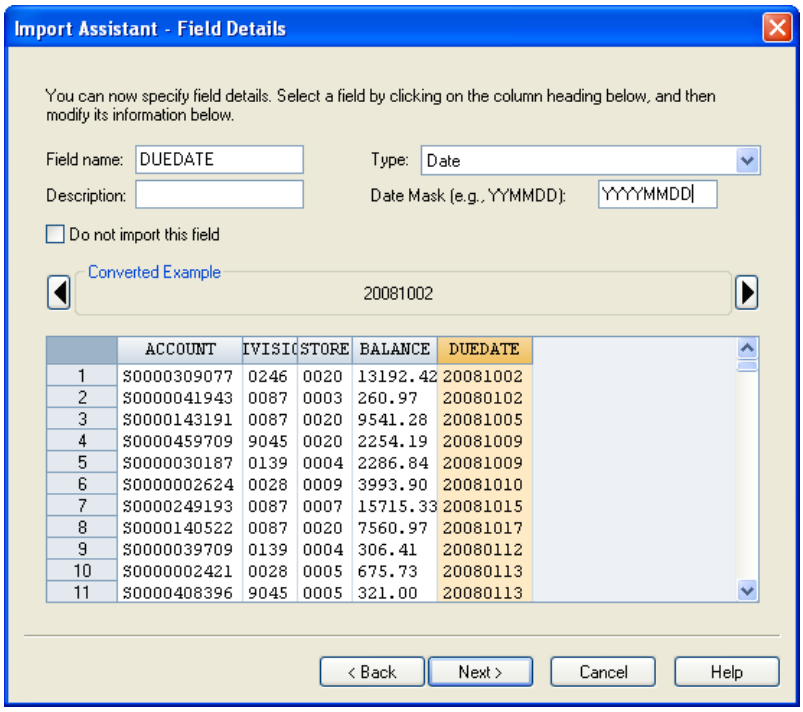
Click **Next**.

The **Import Assistant - Field Details** screen will be displayed. Click on each field heading in turn and using the file layout define the field details. The **Import Assistant** suggests the field **Type:** based on the data. If this is incorrect then change it to the field type specified in the following file layout.

ACCOUNTS RECEIVABLE DETAIL FILE RECORD LAYOUT

Field Name	Type	Dec	Description
ACCOUNT	Character		Account Number
DIVISION	Character		Division Code
STORE	Character		Store Number
BALANCE	Numeric	2	YTD Balance
DUEDATE	Date		YYYYMMDD

The last field is a **Date**. When you select **Date** as a **Type:** you must also supply a **Date Mask**. The mask represents the actual format of the ASCII source data. Use the letters Y, M, and D, and type any spaces or special characters to exactly mimic the source date format of **YYYYMMDD** as shown.



Click **Next** to open the **Import Assistant - Create Fields** screen. No fields will be added at this time.

Click **Next** to open the **Import Assistant - Import Criteria** screen. We will not be adding a criteria to filter our import.

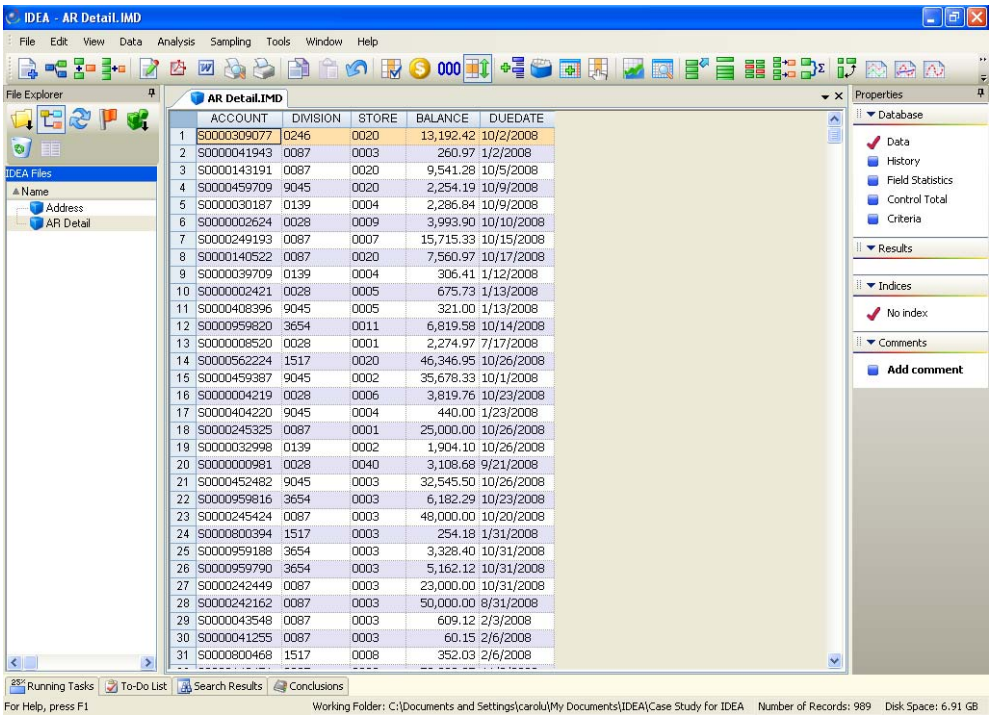
Click **Next** to open the **Import Assistant - Specify IDEA File Name** screen.

Accept the default to **Import** the database into IDEA.

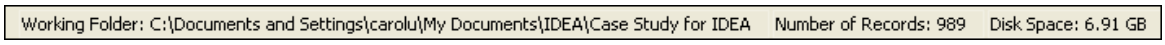
Check the box next to **Generate field statistics**.

Accept the default for the **Save record definition as:** field.

Name the database **AR Detail** and click **Finish** to complete the accounts receivable detail file import. The following screen shows the results of the import.

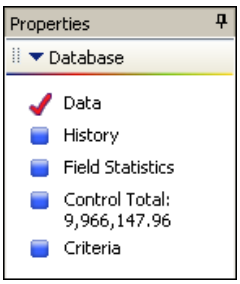


Note again in the lower right hand corner of the screen, that there are **989** records in the **AR Detail** database.



Next we will make sure the imported **AR Detail** database agrees to the client's accounts receivable report total before proceeding.

Click on **Control Total** in the **Database** section of the **Properties** window. Double-click the **BALANCE** field to select it for the **Control Total**. The client's accounts receivable report totaled **$9,966,147.96**.



Close the **AR Detail** database.

Exercise 3: Indexing, Aging and Printing

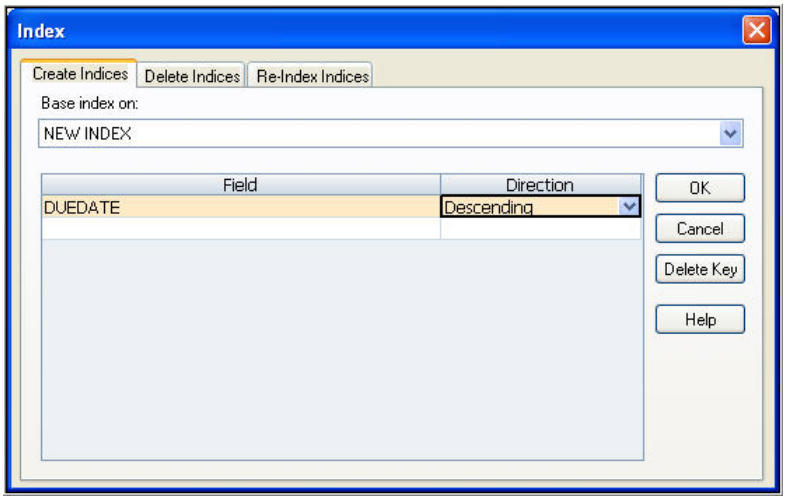
In this exercise, you will create an index, produce an aging report, and print a report and graph from IDEA.

The names of the databases you imported are displayed in the **File Explorer** window. If the **File Explorer** window is not visible, click on the **File Explorer** tab on the left hand side of your screen.

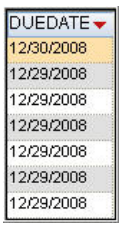
Open the **AR Detail** database. You can change databases by double clicking on the database name you want to view in the **File Explorer** window.

In order to perform an aging, we need to determine the latest invoice date in the **AR Detail** database.

Select **Indices** from the **Data** menu. Click on the down arrow next to **ACCOUNT** in the **Field** column on the **Create Indices** tab and select the **DUEDATE** field from the drop down list. Click in the **Direction** column, click the down arrow, and select **Descending** from the drop down list.



Click **OK** and the database will be indexed by **DUEDATE** in descending order. We can see that the latest date is 12/30/2008. Another way to index using one field is to double-click the field name for ascending order and double-click again for descending order.



The latest date can also be found by clicking on **Field Statistics** in the **Database** section of the **Properties** window and selecting **Date** as the **Field Type**.

Click **Data** to return to the **Database** view. Next we will perform an aging on the **AR Detail** database.

Select **Aging** from the **Analysis** menu options. Populate the **Aging** window as shown below:

Change the **Aging date** to **2008/12/31** (type in the date or click to select the date from the calendar). Accept the defaults for the **Aging field to use:**, the **Amount field to total:**, and **Aging interval in:** area.

Check **Generate detailed aging database:**. Type **AR Detail Aging** as the **File name:**.

Check **Generate key summary database:**. Type **Summary Aging by Division** as the **File name:,** then click **Key** and select **DIVISION** as the **Field** from the drop down list and click **OK**.

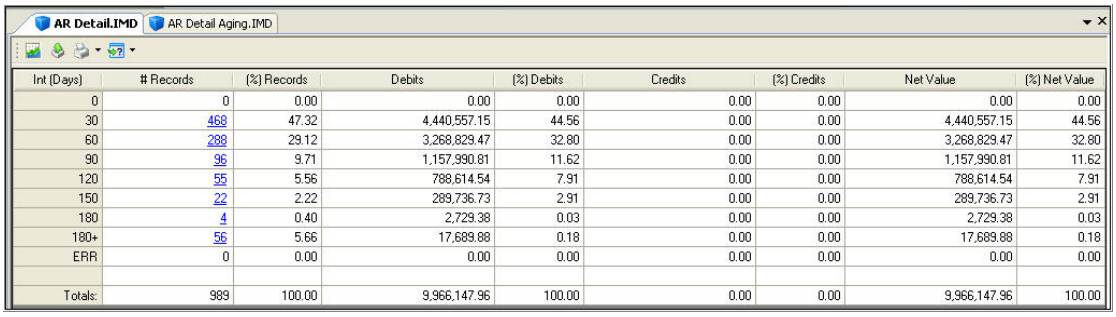
Leave the **Create result:** box checked and accept the default **Name: Aging**.

Click **OK** to run the aging analysis.

The **AR Detail Aging** and **Summary Aging by Division** databases are generated and automatically saved. There is also an **Aging** result on your **AR Detail** database in the **Results** section of the **Properties** window.

The **AR Detail Aging** is your active database. It has the same number of records as the database the aging was performed on and added the aging categories to the right of the data. The balances were distributed among the aging categories based on the number of days between the date in the **DUEDATE** field and the **Aging date**, **2008/12/30**, we specified in the aging process. That number of days was calculated and stored in a field called **AGED_DAYS**.

Select **AR Detail** as the active database. Click on **Aging** in the **Results** section of the **Properties** window to view the **Aging** result.



AR Detail.IMD | AR Detail Aging.IMD

Int (Days)	# Records	(%) Records	Debits	(%) Debits	Credits	(%) Credits	Net Value	(%) Net Value
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	468	47.32	4,440,557.15	44.56	0.00	0.00	4,440,557.15	44.56
60	288	29.12	3,268,829.47	32.80	0.00	0.00	3,268,829.47	32.80
90	96	9.71	1,157,990.81	11.62	0.00	0.00	1,157,990.81	11.62
120	55	5.56	788,614.54	7.91	0.00	0.00	788,614.54	7.91
150	22	2.22	289,736.73	2.91	0.00	0.00	289,736.73	2.91
180	4	0.40	2,729.38	0.03	0.00	0.00	2,729.38	0.03
180+	56	5.66	17,689.88	0.18	0.00	0.00	17,689.88	0.18
ERR	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals:	989	100.00	9,966,147.96	100.00	0.00	0.00	9,966,147.96	100.00

Click the **Print** icon  to print the **Age Analysis** repor**t**.

Click the graph icon  which will allow you to alternate between displaying the results in a customizable graph or grid view. Right mouse click above the graph and select **Edit title**. Type your chart name **AR Detail Aging Analysis at 12/31/2008** in the box at the top of the window and press **Enter**. Click the **Print** icon to print the graph.

Return to the database view of **AR Detail** by clicking on **Data** in the **Database** section of the **Properties** window.

Select **Summary Aging by Division** as your active database. Since this database was extracted from **AR Detail** it is displayed under the **AR Detail** database in the **File Explorer** window. Note that the database has **7** records, one for each division. The balance field and aging categories were also summarized by the **DIVISION** key.

We now want to create a separate database containing only those balances with a due date greater than 180 days. This can be done two different ways.

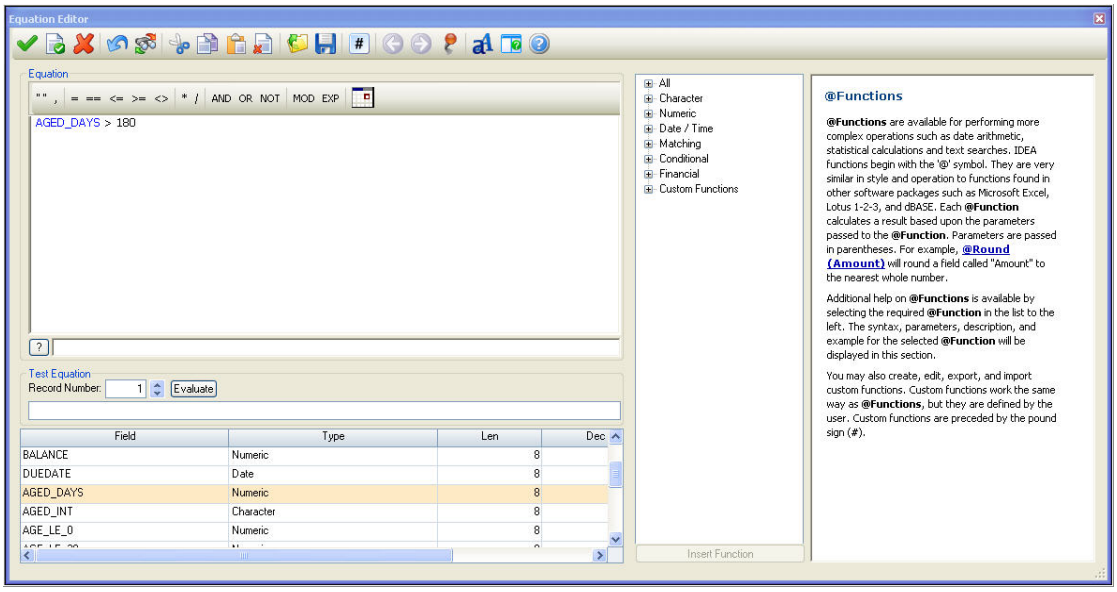
Select **AR Detail Aging** as the active database.

The first method is to use the value in the **AGED_DAYS** field to pull out those balances with a value greater than 180.

From the **Data** menu options select **Extractions**, **Direct Extraction**. Input **Age Greater Than 180 Days** in the box under **File Name**.

Click  to open the **Equation Editor**.

Select the **AGED_DAYS** field by double clicking on the field name in the field list at the bottom of the the **Equation Editor** window. Type in **> 180**.

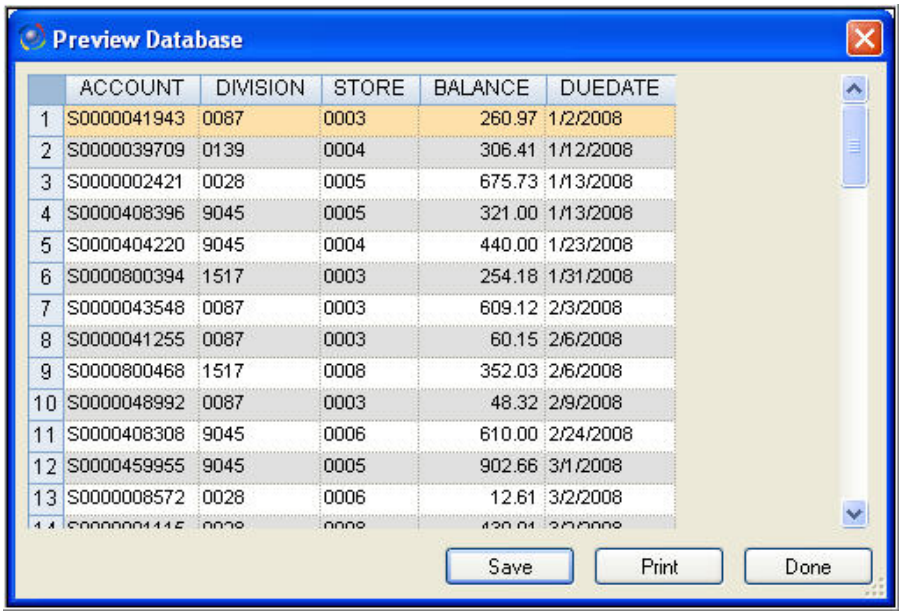


Click  to validate and apply the equation and click **OK**.

The **Age Greater Than 180 Days** database will be created and should have **56** records with a **Control Total** on the **BALANCE** field of **$ 17,689.88**.

The second method to isolate records over 180 days is to use IDEA's drilldown capability. Select **AR Detail** as your active database. Click on **Aging** in the **Results** section of the **Properties** window.

Locate the **180+** aging interval row or the bar on the graph for **180+**. Click once on the blue 56 in the **# Records** column or on the bar in the graph and choose **Display Records** to drilldown to the underlying records. A **Preview Database** window will appear displaying the record details for the 56 records that make up this interval.



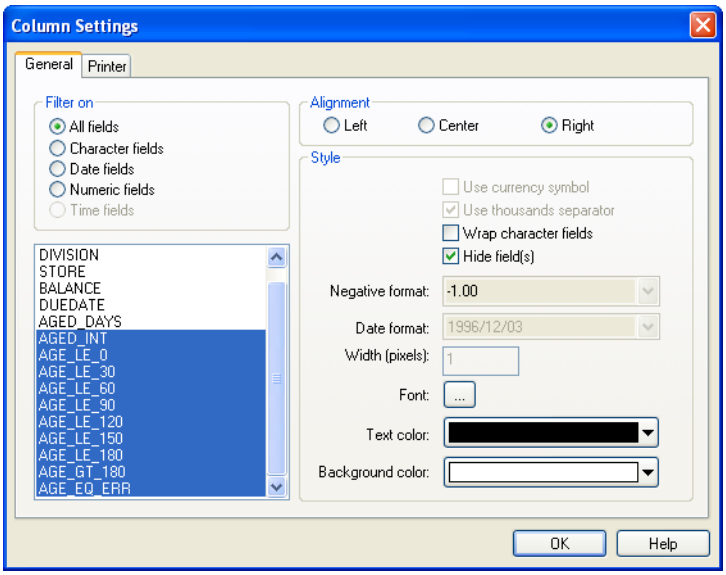
	ACCOUNT	DIVISION	STORE	BALANCE	DUEDATE
1	S0000041943	0087	0003	260.97	1/2/2008
2	S0000039709	0139	0004	306.41	1/12/2008
3	S0000002421	0028	0005	675.73	1/13/2008
4	S0000408396	9045	0005	321.00	1/13/2008
5	S0000404220	9045	0004	440.00	1/23/2008
6	S0000800394	1517	0003	254.18	1/31/2008
7	S0000043548	0087	0003	609.12	2/3/2008
8	S0000041255	0087	0003	60.15	2/6/2008
9	S0000800468	1517	0008	352.03	2/6/2008
10	S0000048992	0087	0003	48.32	2/9/2008
11	S0000408308	9045	0006	610.00	2/24/2008
12	S0000459955	9045	0005	902.66	3/1/2008
13	S0000008572	0028	0006	12.61	3/2/2008

To extract the records to a separate file, click **Save**. In the **Save As** window, name the file **AR Over 180 Days** and click **OK** to complete the extraction process.

Select **Age Greater Than 180 Days** as your active database. Generate a print report from this database that subtotals the accounts by store with the oldest accounts listed first and include only certain fields from the database. The database will need to be indexed in order to create this report.

Select **Indices** from the **Data** menu. Select the **STORE** field from the drop down list and accept the default direction **Ascending**. Click below **STORE** in the **Field** column and select **DUEDATE** from the drop down list and accept the default direction **Ascending**. Click **OK** and the database will be indexed as described above.

We want to include the **ACCOUNT**, **DIVISION**, **STORE**, **BALANCE**, **DUEDATE** and **AGED_DAYS** fields in our report. From the **View** menu select **Fields**, **Column Settings**. Highlight the field(s) to exclude and check the box next to **Hide field(s)**. You can click and drag to highlight multiple adjacent fields to exclude as shown.



Click **OK**. You should now see the **Age Greater Than 180 Days** database without the fields you specified to hide.

Column Settings and other commonly used functions are also available through right mouse click when your cursor is over the field names.

Now we need to change the order of the columns because we want the report to print in the following order: **STORE**, **ACCOUNT**, **DIVISION**, **DUEDATE**, **AGED_DAYS** and **BALANCE**.

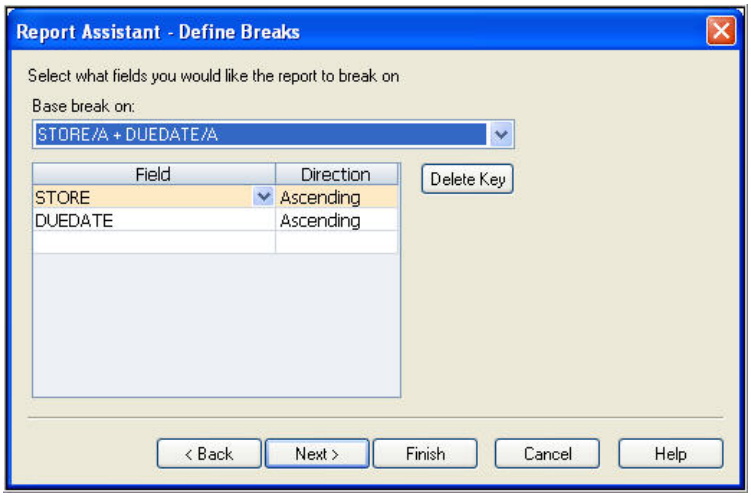
To move a column, left click once on the column heading so the entire column is highlighted, then left click a second time and hold down on the column heading and drag the column to the desired position. The column will be positioned to the right of the red indicator line.

After changing the column order, increase the width of the **BALANCE** field to provide adequate space for subtotals and grand totals in the report. Left click on the right end of the field name you want to increase and drag to the right.

From the **File** menu select **Print**, **Create Report**. This will open the **Report Assistant**. Accept the defaults: **Horizontal** report, **Use existing report**, **Show record numbers**, and **Include database name in report**.

Click **Next** to open the **Report Assistant - Headings** screen to change the name and alignment of the field headings. Accept the defaults.

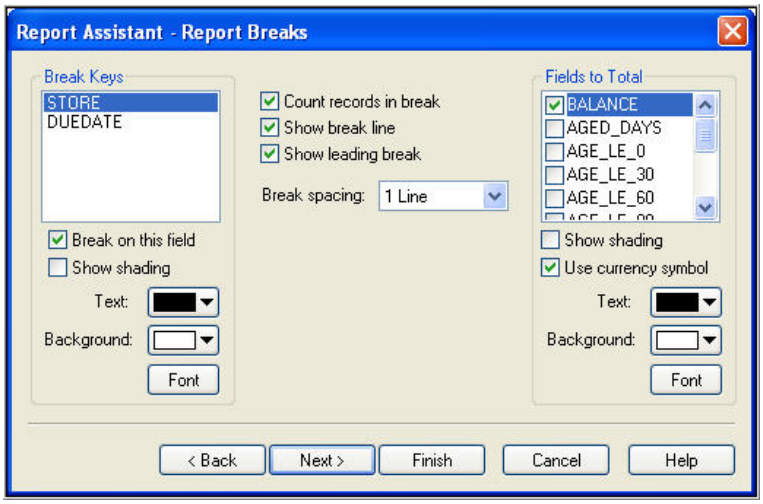
Click **Next** to open the **Report Assistant - Define Breaks** screen. The index created for the database defaults as the basis for breaking (subtotaling), which is what we want.



Click **Next** to open the **Report Assistant – Report Breaks** screen.

With the **STORE** field highlighted in the **Break Keys** box, check the **Break on this field** option box. Accept the defaults to: **Count records in break**; **Show break line, Show leading break** and **Break spacing: 1 Line**.

With the **BALANCE** field highlighted in the **Fields to Total** box, check the box next to **BALANCE** to subtotal on that field and check the box to **Use currency symbol**.



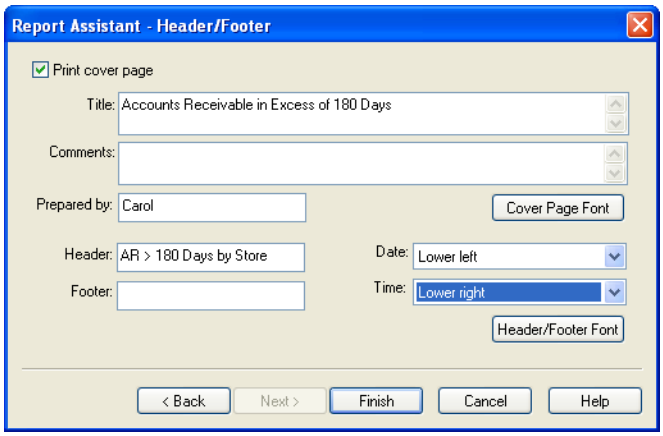
Click **Next** to open the **Report Assistant – Grand Totals** screen. Check the box next to the **BALANCE** field to have grand totals calculated on this field. The **Use currency symbol** box should already be checked.

Click **Next** to open the **Report Assistant - Header/Footer** which is the last screen of the **Create Report** option.

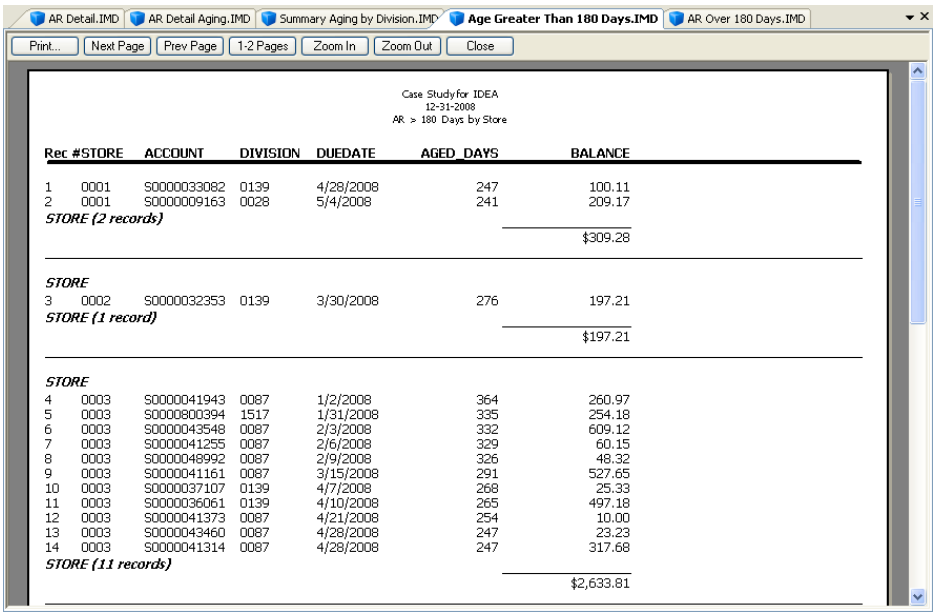
Check **Print cover page** and complete the following:

Title: Accounts Receivable in Excess of 180 Days
Prepared by: *Your Name*
Header: A/R > 180 Days by Store

Change the **Date:** location to **Lower left** and the **Time:** location to **Lower right**.



Click **Finish** and click **Yes** to preview the report. Click **Next Page** to advance to the first detail page of the report. Click **Zoom In** for a closer view of the report.



Click **Print** to print the report if it appears complete. Click **Close** to close the preview.

Close all open databases.

Exercise 4: Stratified Random Sampling

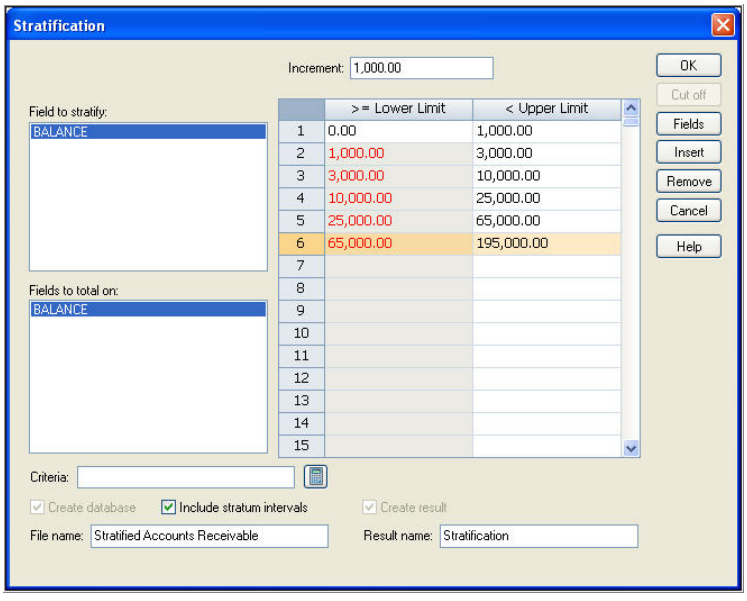
In this exercise you will stratify balances in the **AR Detail** database, create a stratification file, perform a stratified random sample, and print a custom report.

Open the **AR Detail** database. Click **Field Statistics** in the **Database** section of the **Properties** window. With the **Balance** field checked in the **Numeric Fields** box, note that the **Minimum Value** is **0.59** and the **Maximum Value** is **179,570.08**. This information helps determine the range of strata bands needed. Click **Data** in the **Database** section of the **Properties** window to return to the database view.

Select **Stratified Random Sample** from the **Sampling** menu. Select **Perform a numeric stratification** and click **Continue**.

When the **Stratification** screen appears, change the value in the **Increment:** box from **10,000.00** to **1,000.00**. In the **Field to stratify:** box select **BALANCE**. Select **BALANCE** under the **Fields to total on:**. Check **Include stratum intervals** and type **Stratified Accounts Receivable** as the **File name:**. Accept the default **Result name: Stratification**

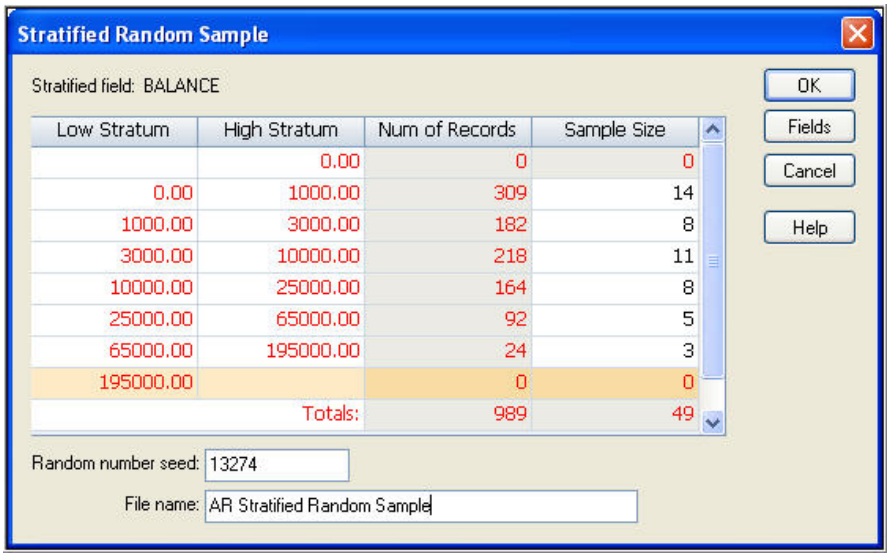
Click on the first column below **>=Lower Limit** and change the amount from **0.59** to **0.00**. Left click in the first column below **<Upper Limit** to fill **<Upper Limit** with **1,000.00**. Click on the second column to fill the **>=Lower Limit** and the **<Upper Limit** column. Click the value in the **<Upper Limit** cell on row 2 and change the **<Upper Limit** amount to **3,000.00**. Continue entering the following amounts in the **<Upper Limit** column: **10,000.00**, **25,000.00**, **65,000.00** and **195,000.00** as shown below.



Click **OK**.

When the **Stratified Random Sample** screen appears, left click in the **Sample Size** column in the row with the interval of **0.00** to **1000.00** and enter **14**. Continue entering the following sample selection quantities: **8**, **11**, **8**, **5**, and **3** as shown in the **Stratified Random Sample** screen example. We will select a sample of **49** records.

Input **AR Stratified Random Sample** as the **File name:**.



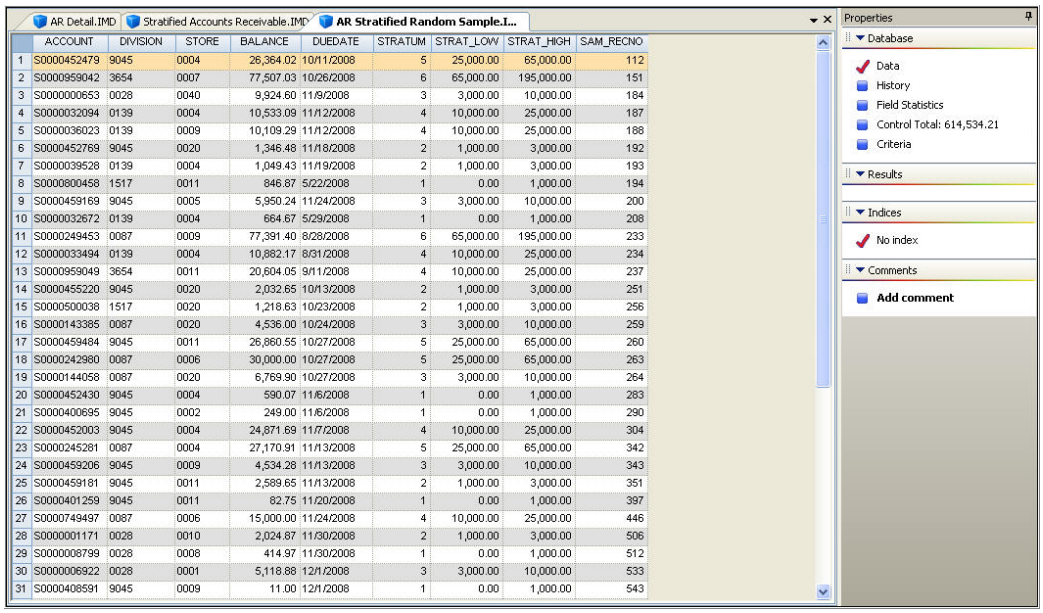
Click **OK**.

Two databases were generated during the process – a **Stratified Accounts Receivable** database containing all **989** records from the **AR Detail** database, and a **49** record **AR Stratified Random Sample** database.

Four fields were added to both databases:

- **STRATUM** field indicating the stratum interval each record falls into
- **STRAT_LOW** and **STRAT_HIGH** fields showing the assigned values for each stratum interval
- A **SAM_RECNO** field containing the record number from the **AR Detail** database

Select **AR Stratified Random Sample** as the active database.



AR Detail.IMD | Stratified Accounts Receivable.IMD | AR Stratified Random Sample.I...

	ACCOUNT	DIVISION	STORE	BALANCE	DUEDATE	STRATUM	STRAT_LOW	STRAT_HIGH	SAM_RECNO
1	S0000452479	9045	0004	26,364.02	10/11/2008	5	25,000.00	65,000.00	112
2	S0000959042	3654	0007	77,507.03	10/26/2008	6	65,000.00	195,000.00	151
3	S0000000653	0028	0040	9,924.60	11/9/2008	3	3,000.00	10,000.00	184
4	S0000032094	0139	0004	10,533.09	11/12/2008	4	10,000.00	25,000.00	187
5	S0000036023	0139	0009	10,109.29	11/12/2008	4	10,000.00	25,000.00	188
6	S0000452769	9045	0020	1,346.48	11/18/2008	2	1,000.00	3,000.00	192
7	S0000039528	0139	0004	1,049.43	11/19/2008	2	1,000.00	3,000.00	193
8	S0000800458	1517	0011	846.87	5/22/2008	1	0.00	1,000.00	194
9	S0000459169	9045	0005	5,950.24	11/24/2008	3	3,000.00	10,000.00	200
10	S0000032672	0139	0004	664.67	5/29/2008	1	0.00	1,000.00	208
11	S0000249453	0087	0009	77,391.40	8/28/2008	6	65,000.00	195,000.00	233
12	S0000033494	0139	0004	10,882.17	8/31/2008	4	10,000.00	25,000.00	234
13	S0000959049	3654	0011	20,604.05	9/11/2008	4	10,000.00	25,000.00	237
14	S0000455220	9045	0020	2,032.65	10/13/2008	2	1,000.00	3,000.00	251
15	S0000500038	1517	0020	1,218.63	10/23/2008	2	1,000.00	3,000.00	256
16	S0000143385	0087	0020	4,536.00	10/24/2008	3	3,000.00	10,000.00	259
17	S0000459484	9045	0011	26,860.55	10/27/2008	5	25,000.00	65,000.00	260
18	S0000242980	0087	0006	30,000.00	10/27/2008	5	25,000.00	65,000.00	263
19	S0000144058	0087	0020	6,769.90	10/27/2008	3	3,000.00	10,000.00	264
20	S0000452430	9045	0004	590.07	11/6/2008	1	0.00	1,000.00	283
21	S0000400695	9045	0002	249.00	11/6/2008	1	0.00	1,000.00	290
22	S0000452003	9045	0004	24,871.69	11/7/2008	4	10,000.00	25,000.00	304
23	S0000245281	0087	0004	27,170.91	11/13/2008	5	25,000.00	65,000.00	342
24	S0000459206	9045	0009	4,534.28	11/13/2008	3	3,000.00	10,000.00	343
25	S0000459181	9045	0011	2,589.65	11/13/2008	2	1,000.00	3,000.00	351
26	S0000401259	9045	0011	82.75	11/20/2008	1	0.00	1,000.00	397
27	S0000749497	0087	0006	15,000.00	11/24/2008	4	10,000.00	25,000.00	446
28	S0000001171	0028	0010	2,024.87	11/30/2008	2	1,000.00	3,000.00	506
29	S0000008799	0028	0008	414.97	11/30/2008	1	0.00	1,000.00	512
30	S0000006922	0028	0001	5,118.88	12/1/2008	3	3,000.00	10,000.00	533
31	S0000408591	9045	0009	11.00	12/1/2008	1	0.00	1,000.00	543

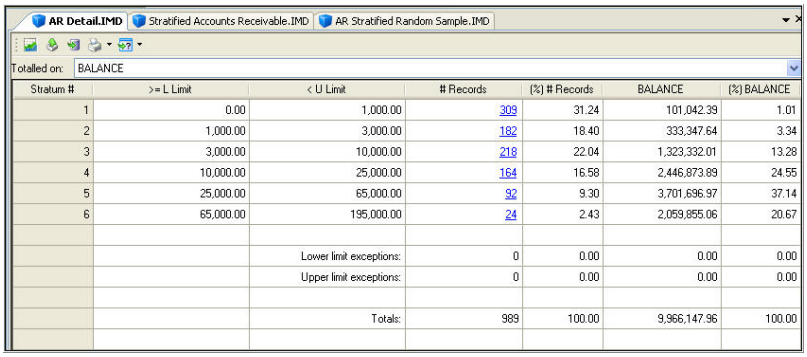
Properties

- Database
  - Data
  - History
  - Field Statistics
  - Control Total: 614,534.21
  - Criteria
- Results
- Indices
  - No index
- Comments
  - Add comment

The **BALANCE** field is set as the **Control Total**.

Is your control total the same as the amount shown in the database screenshot above, **$614,534.21**? What would cause your sample population to be different?

Select **AR Detail** as the active database. Click **Stratification** in the **Results** section of the **Properties** window to display the **Stratification** result that was generated. This result summarizes the number of records and amounts by each stratum interval specified in the stratification process.



AR Detail.IMD | Stratified Accounts Receivable.IMD | AR Stratified Random Sample.IMD

Totalled on: BALANCE

Stratum #	>= L Limit	< U Limit	# Records	(%) # Records	BALANCE	(%) BALANCE
1	0.00	1,000.00	309	31.24	101,042.39	1.01
2	1,000.00	3,000.00	182	18.40	333,347.64	3.34
3	3,000.00	10,000.00	218	22.04	1,323,332.01	13.28
4	10,000.00	25,000.00	164	16.58	2,446,873.89	24.55
5	25,000.00	65,000.00	92	9.30	3,701,696.97	37.14
6	65,000.00	195,000.00	24	2.43	2,059,855.06	20.67
		Lower limit exceptions:	0	0.00	0.00	0.00
		Upper limit exceptions:	0	0.00	0.00	0.00
		Totals:	989	100.00	9,966,147.96	100.00

The **Stratification** result has the same drill down, extraction and graphing capabilities you saw in the **Aging** result in Exercise 3: Indexing, Aging and Printing.

Click  to print the Stratification report. Close all databases.

Exercise 5: Summary Reporting

In this exercise you will create a summary report showing the number of accounts and total balances outstanding by store.

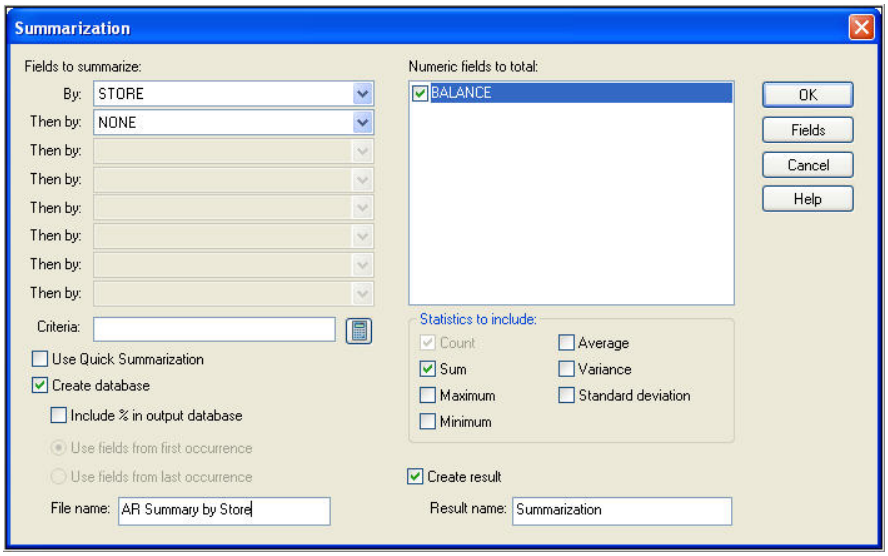
Open the **AR Detail** database.

Select **Summarization** from the **Analysis** menu.

Select **STORE** in the **Fields to summarize: By:**. This will accumulate the records for each store.

Select **BALANCE** in the **Numeric fields to total:**. This is the numeric field to be added up or accumulated for each store during the summarization process.

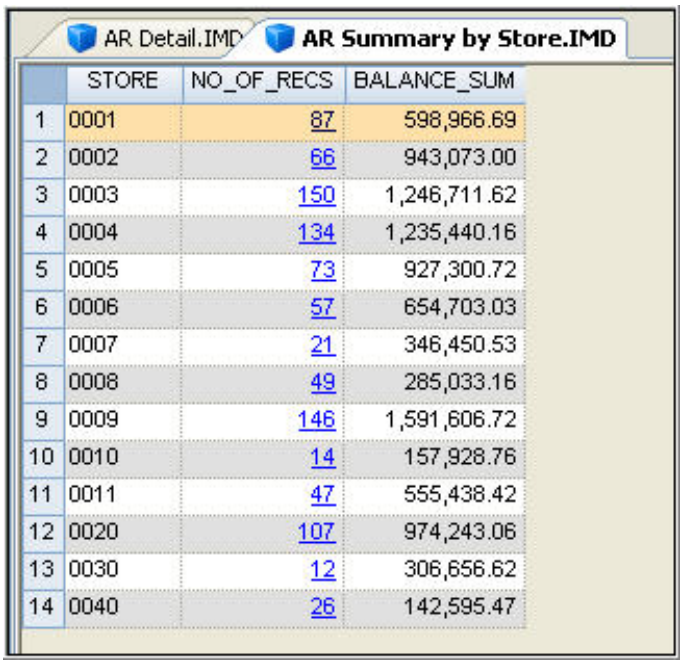
Accept the default to **Sum** under **Statistics to include:**. Note that you can also select to have the **Maximum** or **Minimum** values, the **Average**, the **Varience**, or a **Standard deviation** statistic added to the summarization. You can select as many of these as you want to include.



Accept the default to **Create database** and input **AR Summary by Store** as the **File name:**

Select **Create result** and leave **Summarization** as the **Result name:**.

Click **OK**.



AR Detail.IMD | AR Summary by Store.IMD

	STORE	NO_OF_RECS	BALANCE_SUM
1	0001	87	598,966.69
2	0002	66	943,073.00
3	0003	150	1,246,711.62
4	0004	134	1,235,440.16
5	0005	73	927,300.72
6	0006	57	654,703.03
7	0007	21	346,450.53
8	0008	49	285,033.16
9	0009	146	1,591,606.72
10	0010	14	157,928.76
11	0011	47	555,438.42
12	0020	107	974,243.06
13	0030	12	306,656.62
14	0040	26	142,595.47

The **AR Summary by Store** has 14 records representing 14 stores. The **Control Total** on the **BALANCE_SUM** field is the same as the **Control Total** of the **BALANCE** field from the database we summarized from, **$9,966,147.96**.

IDEA's summarization process adds an additional field between the field(s) you choose to summarize by and the numeric field(s) you totaled. This field, **NO_OF_RECS**, represents the physical number of records from the **AR Detail** database that were collapsed into one summarized line, i.e. the number of accounts each store has. These values, displayed in blue, have drilldown capability to show the detailed information contained in the summarization.

Print a report from the **AR Summary by Store** to include a grand total on the **NO_OF_RECS** and **BALANCE_SUM** field. Follow the report printing procedures explained in Exercise 3 Indexing, Aging and Printing.

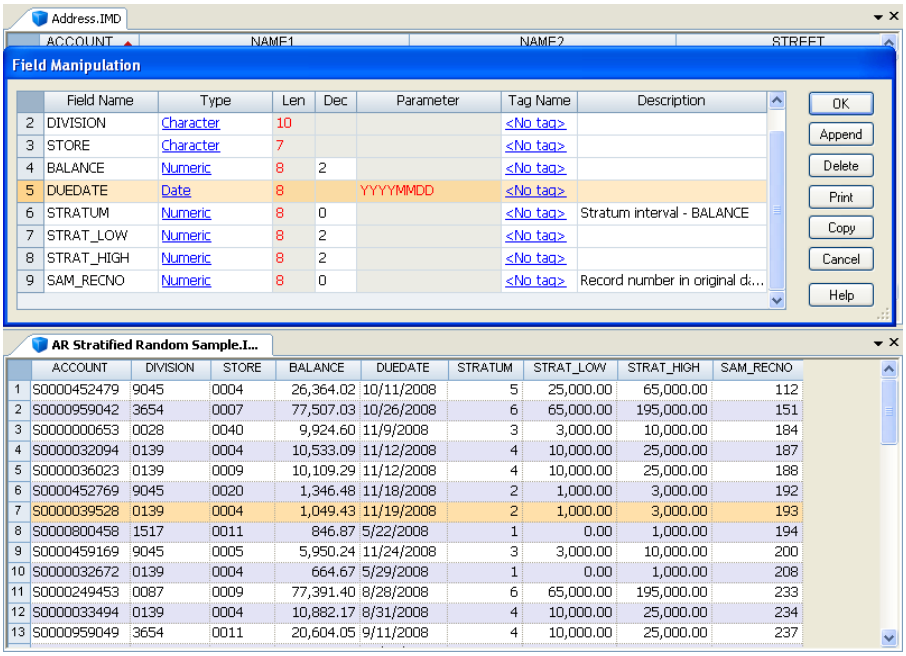
Close all open databases.

Exercise 6: Joining Databases

In this exercise you will join the **AR Stratified Random Sample** database and the **Address** database in order to prepare confirmation letters. Before joining the databases, we have to determine if there is a common field with identical 'type' (character, numeric, date) between the two files.

Open the **Address** database and the **AR Stratified Random Sample** database. Select **New Horizontal Tab Group** from the **Window** menu options.

The **ACCOUNT** field appears to be the common denominator between the two files. To verify they are of the same type, select **Field Manipulation** from the **Data** menu options or double-click over the database.



Note that the **ACCOUNT** field in the **AR Stratified Random Sample** database is character. Confirm that the **ACCOUNT** field in the **Address** database is also character. If so, we can use the **ACCOUNT** field to join these two databases.

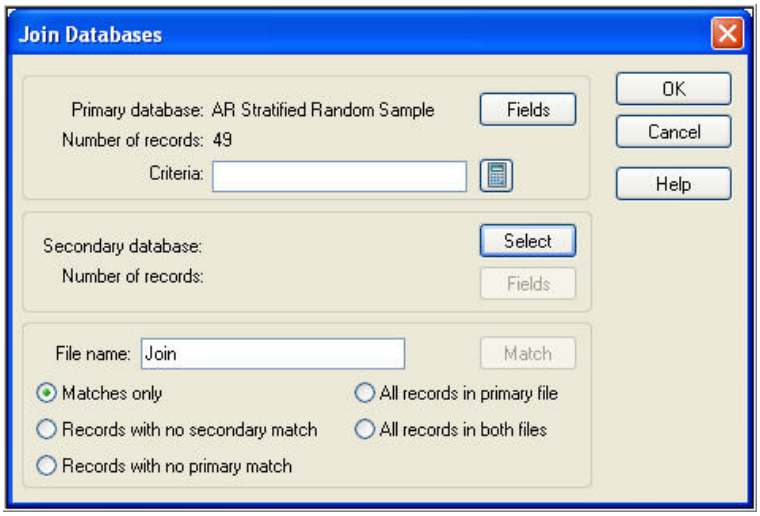
If the fields were not compatible (e.g., same type), check to see if you brought the eleven-digit account number in as two fields instead of one. If so, you could do one of the following:

a. If they are both character, add a **Virtual Character** field (see Exercise 7) with the length **11**. Add the values from the two fields into a new field by using the plus **+** key between the two field names in the **Equation Editor**.
b. Re-import the file assuring the field is brought in as **Character** with all eleven characters in one field.

Next we must decide which database will be our primary and which will be our secondary. We will want the **AR Stratified Random Sample** database to be our primary database as it has the possibility of having multiple records for the same account number.

Select the **AR Stratified Random Sample** as the active database and maximize the **Database** window by closing the **Address** database window.

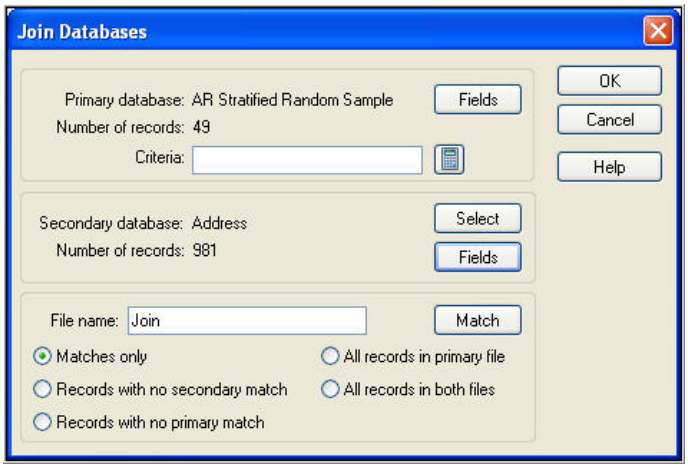
Select **Join Databases** from the **File** menu. The **AR Stratified Random Sample** is the **Primary database:** for the join option because it was the active database.



Click **Fields** in the **Primary database:** area. Click **Clear All**. Select the **ACCOUNT**, **STORE**, **BALANCE**, **STRATUM**, and **STRAT_LOW** fields by clicking on each field name. Click **OK** to return to the **Join Databases** screen.

Click **Select** to choose the **Secondary database:**.

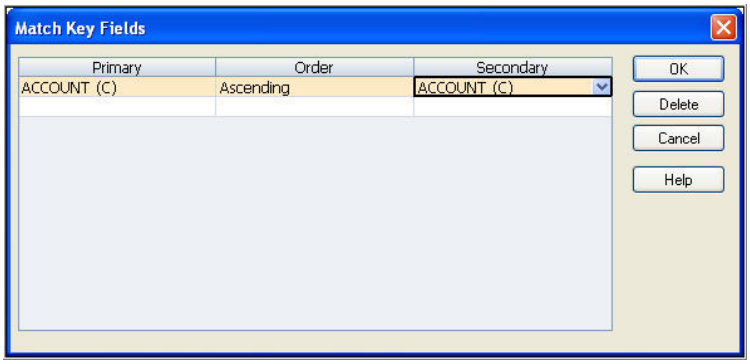
Double click the **Address** database to select it. This will return you to the **Join Databases** screen.



Click **Fields** in the **Secondary database:** area. Click **Clear All**. Select the **NAME1**, **STREET**, **CITYST**, and **ZIP** fields by clicking on each field name. Click **OK** to return to the **Join Databases** screen.

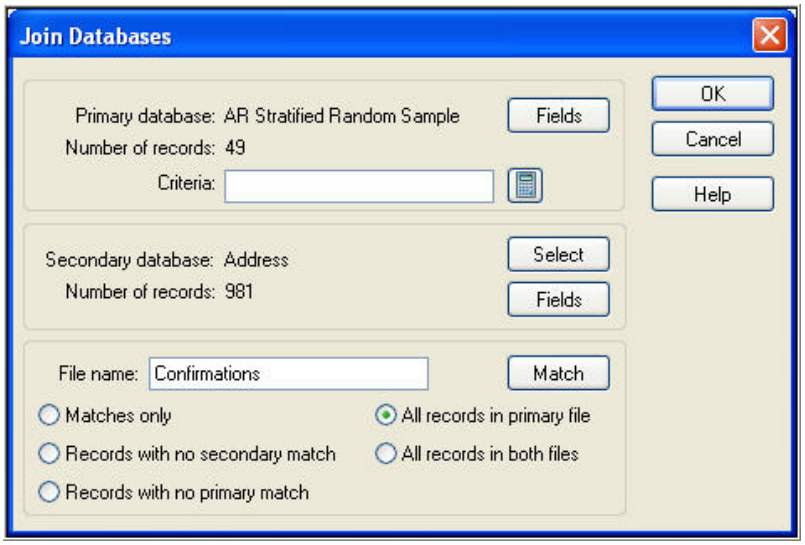
Click **Match** to open the **Match Key Fields** window. Select those fields which are common to the primary and secondary databases and by which the databases are to be joined. These fields do not need to have the same names, but must be of the same data type.

Click in the **Primary** column and select **ACCOUNT** from the drop down list. Accept **Ascending** as the **Order**. Click in the **Secondary** column and select **ACCOUNT** from the drop down list.



Click **OK**.

Input **Confirmations** as the **File name:**. Change the join option from **Matches only** to **All records in primary file**.



Click **OK**.

The resulting **Confirmations** database has the **49** records from the sample database and added the related address fields.

AR Stratified Random Sample.IMD | **Confirmations.IMD**

	ACCOUNT	STORE	BALANCE	STRATUM	STRAT_LOW	NAME1	STREET
1	S0000000653	0040	9,924.60	3	3,000.00	PLAZA 415	MILLBROOK AVENUE
2	S0000001171	0010	2,024.87	2	1,000.00	KENNETH W DOWELL OR	7 HEATHER TERRACE
3	S0000001354	0008	3,924.97	3	3,000.00	KIMBERLY SCHNEIDER	73 RIVER ROAD
4	S0000001568	0008	447.71	1	0.00	HEATHER WEISBROT	63 SHORE ROAD
5	S0000004028	0008	713.77	1	0.00	JAMES A. ALLEN OR	WATERLOO ROAD R.D.#3
6	S0000006796	0001	40.59	1	0.00	JOHN D. LEAHY OR	3 ARLYN LANE
7	S0000006922	0001	5,118.88	3	3,000.00	BERTHA M. MITCHELL	17 CENTER GROVE ROAD
8	S0000007293	0001	3,596.95	3	3,000.00	JANICE ROSEN	26 KINGS RD.
9	S0000008799	0008	414.97	1	0.00	DENNIS J. DEMARCO	61 ASH STREET
10	S0000032094	0004	10,533.09	4	10,000.00	GINNY ABOYOUN	57 WHITE MEADOW RD
11	S0000032672	0004	664.67	1	0.00	ZACHARY B JOYCE MINOR	30 VALLEY ROAD
12	S0000033494	0004	10,882.17	4	10,000.00	ANNA KOENIG	RD 6 BOX 6482
13	S0000035134	0004	587.49	1	0.00	LINDA SIMONIS	25 SNYDER AVE
14	S0000036023	0009	10,109.29	4	10,000.00	MARGAERT SHUMAN OR	420 HOLMES ST.
15	S0000038144	0009	2,080.73	2	1,000.00	MRS LIZA TKACZYSZYN	222 BOONTON AVE
16	S0000039528	0004	1,049.43	2	1,000.00	NATALIE ZACHARIN OR	37 COPELAND ROAD
17	S0000041928	0007	224.38	1	0.00	ICF ARIELLE N GUINDON	47 SEMINOLE AVE
18	S0000044953	0003	7,085.56	3	3,000.00	LAURA JEAN NIENSTADT OR	555 DIAMOND SPRING RD.
19	S0000045385	0009	812.97	1	0.00	ROCCO L MURRO	25 DELBARTON DR
20	S0000048549	0003	11.19	1	0.00	DOUGLAS HOLDEN	179 E MAIN ST
21	S0000143385	0020	4,536.00	3	3,000.00	BERTHA M. LUCAS	138 LAKE AVE.
22	S0000144058	0020	6,769.90	3	3,000.00	JOHN M. RICHARDS	109 FIRST STREET, APT 18
23	S0000159537	0003	2,632.43	2	1,000.00	ITF TAMMY BOSTEDO	917 GREEN POND RD.
24	S0000242980	0006	30,000.00	5	25,000.00	ROBERT D'ALBERTI	RD 3 BOX 96
25	S0000245027	0003	3,200.00	3	3,000.00	HARRY T. FERRONE OR	27 COBB ST.
26	S0000245281	0004	27,170.91	5	25,000.00	JOHN W MARSH	335 FRANKLIN ROAD
27	S0000249453	0009	77,391.40	6	65,000.00	ANNA BENSH OR	317 TAFT STREET
28	S0000249542	0011	100,000.00	6	65,000.00	ITF ROBERT V PALLAY SR	157 WAUGHAW ROAD

Close all databases.

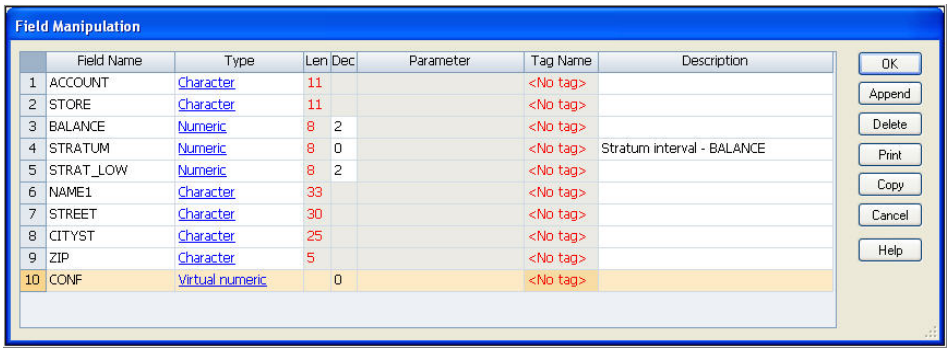
Exercise 7: Creating Virtual Fields

In this exercise you will add a field to the **Confirmations** database to create a confirmation control number for each record. This is also referred to as **Appending** a field.

Open the **Confirmations** database.

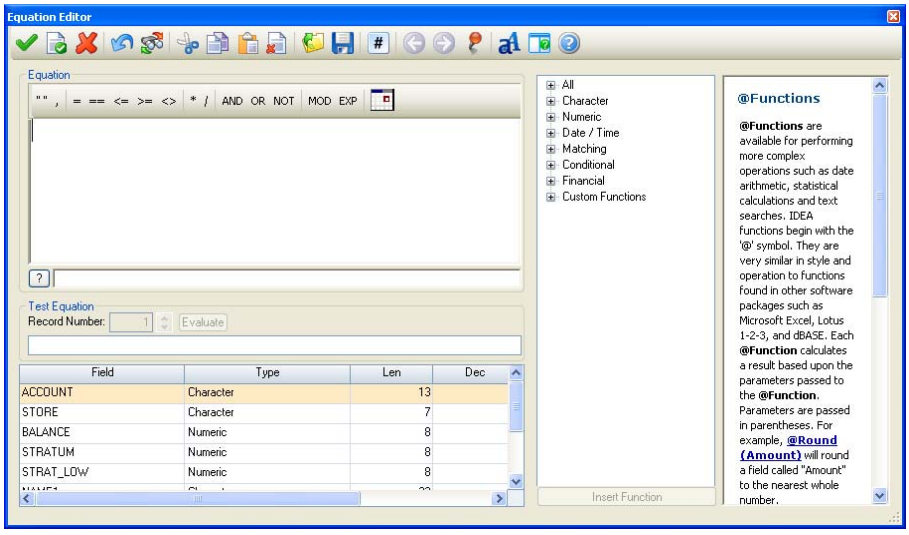
Select **Field Manipulation** from the **Data** menu or double-click over the database area. Click **Append.**

In the **Field Name** column enter **CONF**. Click in the **Type** column and select **Virtual numeric** from the drop down list.



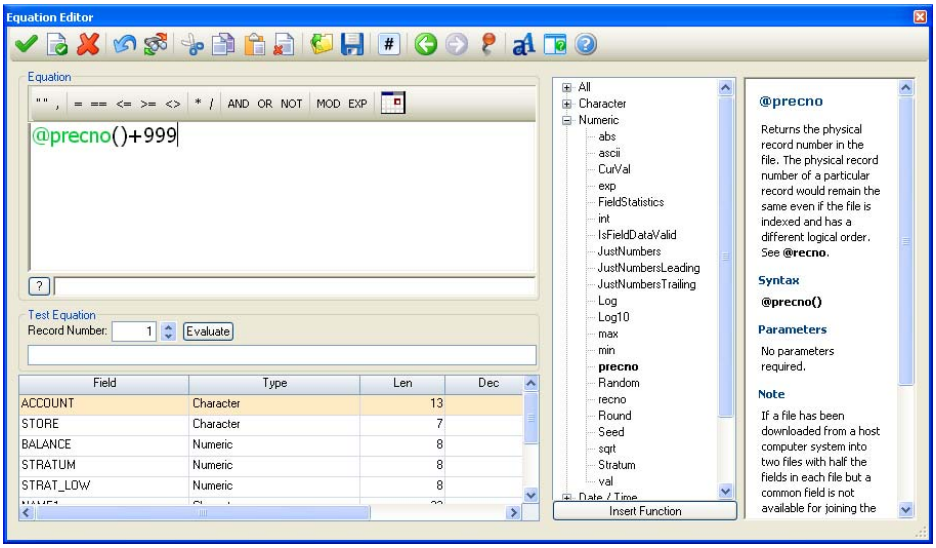
Accept the default of **0 Dec** (decimals).

Click in the **Parameter** column and the **Equation Editor** window will open.



In the center **@Functions** box, expand the **Numeric** functions and scroll down to select the **precno** function. Double-click to insert it into the **Equation** box (or click **Insert Function**). Notice to the right hand side a brief explanation of the **@precno** is dispalyed. This function assigns a number to each line item in ascending order beginning with 1.

Since you want to start numbering your confirmations at 1000, and **@precno** starts with 1, we will add 999 to the first value by entering the following equation: **@precno()+999** using your keypad.



Click the green check mark to validate and apply the equation.

Click **OK**.

The **CONF** field will be added to the far right of the database

Next, create and print a **Confirmation Control Report** that includes the **ACCOUNT**, **NAME1**, **BALANCE** and **CONF** fields.

Have the report indexed in ascending **NAME1** order and total the **BALANCE** field.

Include a meaningful cover page. Refer to Exercise 3, Indexing, Aging and Printing for assistance in generating a print report.

Close all open databases.

Exercise 8: Exporting From IDEA

In this exercise you will export an IDEA database to Microsoft Excel and use Microsoft Word to create a mail merge file to assist in the generation of confirmation letters.

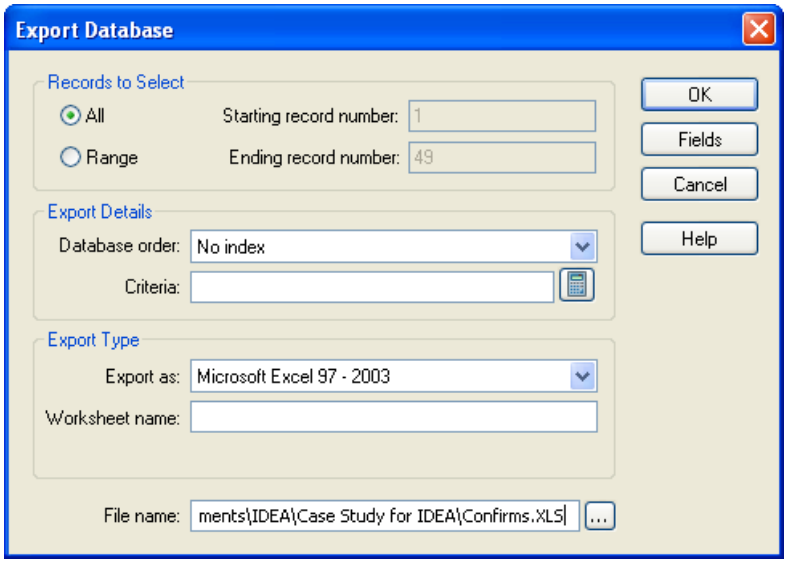
Open the **Confirmations** database.

Select **Export Database** from the **File** menu.

Select **Microsoft Excel 97-2003** from the **Export as:** drop down list.

Click **Fields**. Click **Clear All** and select the **ACCOUNT**, **STORE**, **BALANCE**, **NAME1**, **STREET**, **CITYST**, **ZIP** and **CONF** fields and click **OK**.

Click the  button at the end of the **File Name:** box. Name the file **Confirms**. Make sure the file is saved in the **Case Study for IDEA** folder and click **Save**.



Click **OK** and the file will be exported.

Close all open databases and close IDEA.

Exercise 9: Microsoft Word Mail Merge

In this exercise, you will merge the file you exported in Exercise 8 with a confirmation form letter that has been provided for you. The mail merge process will insert the confirmation information for each customer and create form letters for mailing.

Open Microsoft Word. Open the confirmation form letter **Confword.doc**. This file was included with the files you copied into the **Case Study for IDEA** folder in the first exercise.

For Microsoft Word 2003, choose **Letters and Mailings** then **Mail Merge** from the **Tools** menu options to open the **Mail Merge** window. Under **Select document type**, accept the default **Letters**. Click **Next: Starting document**.

For Microsoft Word 2007, choose **Mailings** then **Start Mail Merge** from the toolbar. Select **Step by Step Mail Merge Wizard**. Click **Next: Starting document**.

Under **Select starting document**, accept the default **Use the current document**. Click **Next: Select recipients**.

Under **Select recipients**, accept the default **Use an existing list**. Under **Use an existing list**, click **Browse**.

Navigate to your **Working Folder**, **Case Study for IDEA,** and select the **Confirms** file exported in Exercise 8 and click **Open**. In the **Select Table** window, accept the defaults and click **OK**.

In the **Mail Merge Recipients** window, accept the defaults and click **OK**.

Click **Next: Write your letter**. Click **Next: Preview your letters**. Review the first displayed confirmation letter. Click **Next: Complete the merge**.

Under **Merge**, click **Edit individual letters**. When the **Merge to New Document** window appears, accept the default **All** and click **OK**.

The **49** confirmation letters will be generated. The name, address, account number, store number, balance and confirmation number from each record in the confirmation file will be merged into a separate letter as follows.

Print out your first letter. Note: Make sure you change the print range to current page or page 1.

Save your confirmation letters to a NEW document named **Case Study Confirmations**. Do NOT save over your confirmation form letter.

Close Word.

This concludes Part I of the Case Study for IDEA.

Big Kachina, Inc.
1250 Wood Branch Park Drive
Houston, TX 77079

THIS IS NOT A REQUEST FOR PAYMENT, BUT
IS SOLELY FOR VERIFICATION PURPOSES

PLAZA 415
MILLBROOK AVENUE
RANDOLPH, AZ, 72196

Our auditors, Tick & Tie, LLP are engaged in an audit of our financial statements. In connection therewith, please confirm directly to them whether or not the balance of your account as of December 31, 2008 agrees with your records at that date. If the amount is not in agreement with your records, please furnish any information you may have which will assist them in reconciling the difference.

After signing in the space provided below, please mail directly to Tick & Tie, LLP. A stamped addressed envelope is enclosed for your convenience.

Very truly yours,

Big Kachina, Inc.

Account number S0000000653 for Store number 0040 in the amount of $9,924.60 agrees with our records, except as follows:

Customer:

Signature:

1000

Advanced IDEA Exercises

IDEA's functionality lets you plan an audit to reduce the sampling risk or to be able to quantify findings that result in any sample. Access to all the records also lets you perform data mining activities to help the client improve operations and results. Following are some advanced exercises:

1. Find the customers who have an account at more than one store.
   (Hint: Duplicate Key Detection)

2. What is the significance of the division field? If you found that most of the past due accounts were related to a certain division, would it make a difference in your audit approach?

3. Which store has the best aging?
   (Hint: Exercise 3 – Summary Aging by Division)

4. What is the average Accounts Receivable balance by division?
   (Hint: Exercise 5 – AR Summary by Store)

5. What is the average Accounts Receivable balance by store?

Planning and Performing an Inventory Audit Using IDEA

Using your knowledge of auditing, develop an audit program that focuses on the inventory data file (**Invent.xls**) provided in the **Case Study for IDEA** folder. The audit program steps must be performed using IDEA. Other program steps, such as inventory observation, should not be a part of this audit program.

The **Invent.xls** file contains the following fields:

PROD LINE	Product line
STK NUM	Stock number
LOC CODE	Location code
LAST SALE	Date of last sale
QTY LAST SALE	Quantity sold during most recent sale
NUM SOLD YEAR	Number sold in current year
UNIT COST	Unit cost
INV	Quantity in inventory according to perpetual inventory
REPL COST	Replacement cost

Be certain your audit program includes the following items:

a. A documented sampling plan. This should consist of a memo explaining the justification for your sample size, including all assumptions you make regarding controls, etc.

b. The audit objective to be achieved by each audit procedure.

c. Inclusion of at least one virtual field (see Part I, Exercise 7).

Using IDEA, perform and document each audit procedure in your audit program.

Begin by Importing the **Invent.xls** file into IDEA (see Part I, Exercise 2).

Your inventory database should have **221** records with a control total on the **UNIT COST** field of **$36,102.75**.

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