

# CASE STUDY FOR IDEA

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**IDEA VERSION EIGHT** 

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#### **Overview**

IDEA<sup>®</sup> 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 VBAcompatible 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<sup>®</sup> 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 <u>http://www.audimation.com</u> 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, <u>http://www.audimation.com</u>, under Resources > Self Study

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

on your desktop

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selecting IDEA from the start 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**.

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

Project Properties		
Project name:	Case Study for IDEA	ОК
Period:	12-31-2008	Cancel
		Help

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.

Import Assistant	
Select the format: Advanced Record D Ads400 - dBASE - Lotus - Microsoft Access - Microsoft Excel - ODBC - Print Report and Add - SAP/AIS - Text - XML	refinition Editor
Computer location	Mu Computer
File name:	C:\Documents and Settings\carolu\My Documents\IDEA\Case Study for
Optional definition file:	
	Edit template
	< Back Next > Cancel Help

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**.

The Imp	ort Assistant has examined the file and has determined that	t it is a fixed length file.
If this is r	tot correct, please select the correct file type.	
	Circuit anoth	
	Fixed Length	
	EBCDIC Fixed Length	Options
	:	.40:
1	S0000031637LYNDA RANSEGNOLA	
2	S0000249225SOPHIE F. NATHAN	
3	S0000032500MERLE DEL POLITO	
4	S0000800468KERRI STRACCO	
5	S0000001037JULIE ANN LAMPE	
6	S0000452339FREDERICK G. KARASEK	OR MARYANN KARASE
7	S0000245528HAROLD THALMAN	
8	S0000452003ANDREA PORFIDO	
9	S0000459542JOHANNES LEHRBACH	
10	S0000452276DEBRA GARDNER	
11	S0000242432HAZEL L. STEPHENS	OR ROBERT STEPHEN
12	S0000459336JACK H. MARIN	
13	S0000401259EVELYN M. MARKS	
		2
<		>

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**.

Import Ass	istant - Specify Record Length	
Please ve is incorre	reify that the Import Assistant has determined the correct record leng sct, you can adjust it by modifying the value contained in the record in Record length - length of each record in the database	th for the file. If the length ength edit box.
	10 00 00 00	
	:	
1	S0000031637LYNDA RANSEGNOLA	
2	S0000249225SOPHIE F. NATHAN	
3	S0000032500MERLE DEL POLITO	
4	S0000800468KERRI STRACCO	
5	S0000001037JULIE ANN LAMPE	
6	S0000452339FREDERICK G. KARASEK	JR MARYANN KARASE
/	S0000245528HAROLD THALMAN	
8	SUUUU452UU3ANDREA PURFIDU	
10	SUUUU439342JUHANNES LEHRDACH	
11	SOCOOG32270DEDRA GARDNER SOCOO24242422HAZEL I STEDUENS	D DOREDT STEDUEN
12	SOCOLASSINGLAS	JR ROBERT STEFTIEN
13	S0000401259EVELVN M. MARKS	~
<	COCCOLORIZATION IN MINING	>
	< Back Next >	Cancel Help

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 Imp changes	ort Assistant has suggested where potential helds are located in th	e database. Please make any
To CREA	ATE a field line - click the mouse at the desired position.	
To REM	OVE a field line - double click the mouse on the field line.	Column # 53
To MOV	E a field line - select the desired field line and move the mouse.	Hex Value: 54
	: 10 :	40 : 50 🔨
1	S0000031637LYNDA RANSEGNOLA	
2	S0000249225SOPHIE F. NATHAN	
3	S0000032500MERLE DEL POLITO	
4	S0000800468KERRI STRACCO	
5	S0000001037JULIE ANN LAMPE	
6	S0000452339FREDERICK G. KARASEK	OR MARYAND
7	S0000245528HAROLD THALMAN	
8	S0000452003ANDREA PORFIDO	
9	S0000459542JOHANNES LEHRBACH	
10	S0000452276DEBRA GARDNER	
11	S0000242432HAZEL L. STEPHENS	OR ROBERT
12	SO000459336JACK H. MARIN	
13	SO000401259EVELYN M. MARKS	×
<		>

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	<u>From</u>	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.

Import Assistant - Specify Field Delineators
The Import Assistant has suggested where potential fields are located in the database. Please make any changes.
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. Column # 4
To MOVE a field line - select the desired field line and move the mouse. Hex Value: 30
1 S0000031637LYNDA RANSEGNOLA
2 S0000249225SOPHIE F. NATHAN
3 S0000032500MERLE DEL POLITO
4 S0000800468KERRI STRACCO
5 S000001037JULIE ANN LAMPE
6 S0000452339FREDERICK G. KARASEK OR MARYANN
7 S0000245528HAROLD THALMAN
8 S0000452003ANDREA PORFIDO
9 S0000459542JOHANNES LEHRBACH
10 S0000452276DEBRA GARDNER
11 S0000242432HAZEL L. STEPHENS OR ROBERT
12 S0000459336 JACK H. MARIN
13 S0000401259EVELYN M. MARKS
<pre>&lt; Back Next &gt; Cancel Help</pre>

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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.

Import Assis	stant - Field Details			
You can n modify its i	ow specify field details. Sel nformation below.	ect a field by click	ing on the column heading below	v, and then
Field name	: ZIP	Type:	Character	~
Description	n:	í '		
	The set of the Galation	1		
Uo not	import this field			
Con	verted Example	00050		
		06850		
	GUDEET		CITYET	ZTD 🔥
2	J COOLIDGE CT		UIIIJI	217
2	I COULIDGE DI. I FACT CHAINEF TOA		NURWALK, UI	06850
3	I EASI SHAWWEE IRA	л о ром со 717	GTANHODE 17	72103
- 4	1 NEWHAMDSHIDE STE	F. U. DUA GO NEET	NEWTON 17	72160
6	1 OAK KNOLL ROAD		MENDHAM A7	72945
7	1 OVERLOOK DR		ROCKAWAY, AZ	72166
8	1 ROBERTS DRIVE		DENVILLE. AZ	72134
9	1 S. DACOTAH AVE		ROCKAWAY, AZ	72166
10	1 W. HEDDING PLACE	2	MT.TABOR, AZ	72178
11	1 WAYSIDE AVE		DOVER, AZ	72101
<			III	>
		< Back	Next > Cancel	Help

The **Field name:** and **Type:** are required for each column. The **Description:** field is optional. The field names you type in must be <u>IDENTICAL</u> 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.

Import Assistant - Specify	y IDEA File Name
Specify a descriptive name	for the database. Click Finish to import the database into IDEA.
Working directory : C:\Doo	cuments and Settings\carolu\My Documents\IDEA\I
How would you like to use	this data in IDEA ?
🚫 Link - Save disk space	and use this data file.
Import - IDEA runs faste	r when a file is imported.
Generate field statistics	
Create a record number	field
Save record definition as:	C:\Documents and Settings\carolu\My Documents\IDEA\Case Study fr
Database name:	Address
	< Back Finish Cancel Help

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.

🥑 IDEA - Address. IMD						
File Edit View Data Analysis	Samplin	g Tools Wind	ow Help			
📄 📲 📲 🖬 🍞 🖄 🖻	Ø 🍋	8 1 6	🕯 🕼 💽 000 📑 🖶 🚰	🖪 📕 🌌 🗔 💕 🖬 🗄		7 耳 🔴 -
File Explorer 4	+	Address.IMD			• ×	Properties
🗂 ഘ 🔊 🔰 🚅 🗟 💳		ACCOUNT	NAME1	NAME2	~	II - Database
	1	S0000031637	LYNDA RANSEGNOLA		1 CH/	1 Date
DEA Files	2	50000249225	SOPHIE F. NATHAN		1 CO(	
▲Name Re	3	\$0000032500	MERLE DEL POLITO		1 EAS	History
😈 Address	4	50000800468	KERRI STRACCO		1 EBA	Field Statistics
	5	50000001037	TULTE ANN LAMPE		1 NE\	🧧 Control Total
	6	50000452339	EREDERICK G KARASEK	OR MARYANN KARASEK	1 04	🥃 Criteria
	7	50000245528	HABOLD THAI MAN		1 OVI	
	8	50000452003	ANDREA POREIDO		1 ROF	Results
	9	50000459542	10HANNES LEHRBACH		15.[	
	10	50000452276	DEBRA GARDNER		1 W	II 🔻 Indices
	11	5000001022270	HAZEL I STEPHENS	OR ROBERT STEPHENS	1 WA	
	12	50000212102	JACK H MARIN	GRRGBERT GTETTERD	1 WC	Vo index
	13	50000401259	EVELYN M MARKS		10 BE	Comments
	14	50000101203	INEZ CORNISH		10 DL	
	15	5000000003	ITE CHURCH CEMETERY PERPETUITY AS	TRUSTEES BERKSHIRE VALLEY PRESB.	10 HC	Add comment
	16	50000401919	DONNA M. BARRETT		10 Hr	
	17	50000242251	TERESA M EMERICK OR	THOMAS E. EMERICK	1014	
	18	50000242346	STEVEN & TOTH	OR MARGARET TOTH	10.01	
	19	50000452315	DALLA C EVANS	on handanet to th	10 50	
	20	50000039328	ITE ALEJANDRO LEON RODRIGUEZ		10 SE	
	21	50000245742	KATH FEN & ANDREWS OR	WILLIAM ANDREWS	10 5	
	22	50000569674	TOSEPH MICHAEL AMATUCCI		100 E	
	23	50000032158	TOHN L CALLAGHAN IR	OR ANNA CALLAGHAN	100 1	
	23	5000052150	ELORENCE VANDERHOOF OR	EARNHAM VANDERHOOF	100 \	
	24	50000039666	W M L DRODERTY OWNERS ASSN	WOMENS CLUB FUND RAISING	100 \	
	26	500000000000000	MARY RYZEK OR	ONV RYZI K	101 1	
	20	50000240407	ITE POPERT DATRICK BROWN	HENRY BROWN OR	102 1	
	20	S0000303037	HELEN KROLISE	OR MARY VASEY	102 F	
	20	\$00004559942	FRANK GARRISON	CALIFORNIA THOLET	103 E	
	29	\$0000432083	ANTHONY & GIORDAND OR	ELIZABETH GIORDANO	103 (	
		0000000000000	PERMISSION RECORDERED ON		103.6	
<	<				>	

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.

File Explorer			ą.
12 🔁 🏖 🛛	P 📽	0	
IDEA Files			
≜ Name		Re	ecords
🕤 Address			981

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

```
Working Folder: C:\Documents and Settings\carolu\My Documents\IDEA\Case Study for IDEA Number of Records: 981 Disk Space: 6.93 GB
```

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 🔒.

🔰 Address.IMD			
💩 📑 🗧 🔄 🗧 Filter			
Database	Date	User	
C:\Documents and Settings\ca	rolu\My Documents\IDEA\C	ase Study for IDEA\Address.IMD	
🖃 File Import	05/06/2009 - 08:05	carolu	
Imported from:	C:\Documents and Settings	carolu\My Documents\IDEA\Case Study for ID	Ξ
Number of Records:	981		
Record definition name:	C:\Documents and Settings	carolu\My Documents\IDEA\Case Study for ID	Ξ
IDEAScript Code:	dbName = "Address.IMD" Client.ImportDatabase "C:\I Client.OpenDatabase (dbNa	Documents and Settings\carolu\My Documents\ me)	I

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**.

Import	Assi	istant - File Type	×
The If th	e Impo iis is n	rt Assistant has examined the file and has determined that it is a delimited file. ot correct, please select the correct file type.	
		Delimited	
		C Fixed Length	
		EBCDIC Fixed Length	Options
		:	:60 🔨
	1	"ACCOUNT"   "DIVISION"   "STORE"   "BALANCE"   "DUEDATE" DD	
	2	"\$0000309077" "0246" "0020" 13192.42 "20081002"DD	
	3	"\$0000041943" "0087" "0003" 260.97 "20080102"00	
	4	"\$0000143191" "0087" "0020" 9541.28 "20081005"□□	
	5		
	5		
	<u> </u>		
	0	"\$0000249193" "0087" "0007" 15715.33 "20081015"UU	
	10	"\$0000140322   0007   0020  7300.97  20001017 LL "\$0000039709" "0139" "00004" 306 411"20080112"[[]	
	11		
	12	"\$0000408396" "9045" "0005" 321.00 "20080113"	
	13	"\$0000959820" "3654" "0011" 6819.58 "20081014"DD	×
<			>
		< Back Next > Cancel	Help

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**.

Imp	ort Assi	stant - Specify	y Field	l Sepa	arator and	Text Enca	opsulator		X		
	Please inspect the file displayed in the preview and make changes, if required, in the options below.          Field Separator         Delimited files use a special character to separate fields. Please inspect the file below and, if required, change the Field Separator selected.         Comma       Colon       Semicolon       Tab       Space       Other										
	Textenca I Firstvi:	psulator: " sible row is field na	imes	~	He	eader lines to	ignore: 0	*			
	ß										
	2	<0000300077	0246	0020	12102 42	20091002			^		
	- 2	\$00000303077	0240	0020	260 97	20001002					
	4	50000041943	0087	0000	9541.28	20081005					
	5	\$0000459709	9045	0020	2254.19	20081009					
	6	\$0000030187	0139	0004	2286.84	20081009					
	7	\$0000002624	0028	0009	3993.90	20081010					
	8	\$0000249193	0087	0007	15715.33	20081015					
	9	\$0000140522	0087	0020	7560.97	20081017					
	10	\$0000039709	0139	0004	306.41	20080112					
	11	\$0000002421	0028	0005	675.73	20080113					
	12	\$0000408396	9045	0005	321.00	20080113			~		
				C	< Back	Next >	Can	cel	Help		

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 REC	EIVABLE DE	TAIL FI	LE RECORD LAYOUT
Field Name ACCOUNT DIVISION STORE BALANCE DUEDATE	<u>Type</u> Character Character Character Numeric Date	Dec 2	Description Account Number Division Code Store Number YTD Balance 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 <u>actual</u> 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.

Import Assi	stant - Field D	etails					×				
You can now specify field details. Select a field by clicking on the column heading below, and then modify its information below.											
Field name	Field name: DUEDATE Type: Date										
Descriptio	n:		Ī	Date Ma:	sk (e.g., YYMM	DD): YYYYYMMDD					
Do pol	t import this field		_								
	amport this held										
	iverted Example			20091002							
				20001002							
	ACCOUNT	IVISI	STORE	BALANCE	DUEDATE		^				
1	\$0000309077	0246	0020	13192.42	20081002		=				
2	\$0000041943	0087	0003	260.97	20080102						
3	\$0000143191	0087	0020	9541.28	20081005						
4	\$0000459709	9045	0020	2254.19	20081009						
5	\$0000030187	0139	0004	2286.84	20081009						
6	\$0000002624	0028	0009	3993.90	20081010						
7	\$0000249193	0087	0007	15715.33	20081015						
8	\$0000140522	0087	0020	7560.97	20081017						
9	\$0000039709	0139	0004	306.41	20080112						
10	\$0000002421	0028	0005	675.73	20080113						
11	\$0000408396	9045	0005	321.00	20080113		×				
				Back	Next >	Cancel He	elp				

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.

ile Edit View Data	Analysis Sampling Tools Window	v Help			_
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Explorer	AR Detail.IMD			• ×	Properties
1 🕶 🔊 🏴 🔐	ACCOUNT DIVISION	STORE	BALANCE DUEDATE	~	II 🕶 Database
	1 50000309077 0246	0020	13.192.42 10/2/2008		4 0.4
	2 \$0000041943 0087	0003	260.97 1/2/2008	_	Jaca
Files	3 \$0000143191 0087	0020	9,541.28 10/5/2008		History
me	4 \$0000459709 9045	0020	2,254.19 10/9/2008		Field Statistics
Address	5 \$0000030187 0139	0004	2,286.84 10/9/2008		😑 Control Total
AR Detail	6 \$000002624 0028	0009	3,993.90 10/10/2008		🗧 Criteria
5.1	7 \$0000249193 0087	0007	15,715.33 10/15/2008		II - Decile
	8 \$0000140522 0087	0020	7,560.97 10/17/2008		II V Results
	9 \$0000039709 0139	0004	306.41 1/12/2008		
	10 5000002421 0028	0005	675.73 1/13/2008		II TIndices
	11 \$0000408396 9045	0005	321.00 1/13/2008		🥒 No index
	12 \$0000959820 3654	0011	6,819.58 10/14/2008		
	13 5000008520 0028	0001	2,274.97 7/17/2008		ii 🔻 Comments
	14 50000562224 1517	0020	46,346.95 10/26/2008		
	15 \$0000459387 9045	0002	35,678.33 10/1/2008		Add comme
	16 \$0000004219 0028	0006	3,819.76 10/23/2008		
	17 50000404220 9045	0004	440.00 1/23/2008		
	18 50000245325 0087	0001	25,000.00 10/26/2008		
	19 \$0000032998 0139	0002	1,904.10 10/26/2008		
	20 \$000000981 0028	0040	3,108.68 9/21/2008		
	21 \$0000452482 9045	0003	32,545.50 10/26/2008		
	22 \$0000959816 3654	0003	6,182.29 10/23/2008		
	23 \$0000245424 0087	0003	48,000.00 10/20/2008		
	24 \$0000800394 1517	0003	254.18 1/31/2008		
	25 \$0000959188 3654	0003	3,328.40 10/31/2008		
	26 \$0000959790 3654	0003	5,162.12 10/31/2008		
	27 \$0000242449 0087	0003	23,000.00 10/31/2008		
	28 50000242162 0087	0003	50,000.00 8/31/2008		
	29 \$0000043548 0087	0003	609.12 2/3/2008		
	30 \$0000041255 0087	0003	60.15 2/6/2008		
	31 \$0000800468 1517	0008	352.03 2/6/2008	221	
	2		+ <u></u> +++++++++++++++++++++++++++++++	×	

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

Working Folder: C:\Documents and Settings\carolu\My Documents\IDEA\Case Study for IDEA Number of Records: 989 Disk Space: 6.91 GB

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. Doubleclick 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.

rection OK
irection OK
irection OK
Cancel Calcel Help

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.

D	UE	DA	TE	•
1	2/30.	20	08	
1	2/29.	20	08	
1	2/29.	20	08	
1	2/29.	20	08	
1	2/29.	20	08	
1	2/29.	20	08	
1	2/29.	20	08	

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 1) 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**.

Aging date:	2008/12/31	ОК
Criteria:		Cance
Aging field to use:	DUEDATE 🛛 👻	Help
Amount field to total:	BALANCE	
Aging interval in:	Days	
1: 30 🛟	3: 90 💲 5: 150 📚	
2: 60 🛟	4: 120 🗢 6: 180 🗢	_
🗹 Generate detailed	aging database:	1
File name: AR Detail	Aging Fields	
🗹 Generate key sum	mary database:	
File name: Summary	Aging by Division Key	
Create result:		
Nome: 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.J 🌌 🔌 🎲 🔻 👳	AR Detail.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	0.0				
30	468	47.32	4,440,557.15	44.56	0.00	0.00	4,440,557.15	44.5				
60	288	29.12	3,268,829.47	32.80	0.00	0.00	3,268,829.47	32.8				
90	<u>96</u>	9.71	1,157,990.81	11.62	0.00	0.00	1,157,990.81	11.6				
120	55	5.56	788,614.54	7.91	0.00	0.00	788,614.54	7.9				
150	22	2.22	289,736.73	2.91	0.00	0.00	289,736.73	2.9				
180	4	0.40	2,729.38	0.03	0.00	0.00	2,729.38	0.0				
180+	<u>56</u>	5.66	17,689.88	0.18	0.00	0.00	17,689.88	0.1				
ERR	0	0.00	0.00	0.00	0.00	0.00	0.00	0.0				
Totals:	989	100.00	9,966,147.96	100.00	0.00	0.00	9,966,147.96	100.00				

Click the **Print** icon it to print the **Age Analysis** report.

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 loopen 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**.

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Equation				1	
Equation , = == <= >= <> AGED_DAYS > 180	* / AND OR NOT MOD EXP			All     Character     Numeric     Numeric     Nate / Time     Matching     Conditional     Financial     E. Custom Functions	©Functions @Functions are available for performing more complex operations such as date arithmetic, statistical calculations and text searches. IDEA functions begin with the 'B' symbol. They are very similar in style and operation to functions found in other software packages such as Microsoft Excel, Lotus 1-2-3, and DASE. Each @Function calculates a result based upon the parameters passed to the @Function. Parameters are passed in parentness. For example, @Round <u>(Amount)</u> will round a field called 'Amount' to the nearest whole number.
? ] Test Equation Record Number: 1 © [ Field ALANCE UEDATE GED_DAYS GED_INT	valuate Type Numeric Date Numeric Character	Len 8 8 8 8 8 8 8	Dec 🔨		Additional help on <b>@Function</b> is available by selecting the required <b>@Function</b> in the list to the left. The syntax, parameters, description, and example for the selected <b>@Function</b> will be displayed in this section. You may also create, edit, export, and import custom functions. Custom functions, custom functions are the vary as <b>@Functions</b> , but they are defined by the user. Custom functions are preceded by the pound sign (#).
[2] Text Equation Record Number: 1	valuate) Type Numeric Date Numeric Character Numeric	Len 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Dec 🔨		Additional help on <b>@functions</b> is available by selecting the required <b>@function</b> in the list to the left. The syntax, parameters, description, and example for the selected <b>@function</b> will be displayed in this selected <b>@function</b> . You may also create, edit, export, and inport custom functions. Your functions. Custom functions with the same way as <b>@Functions</b> , but they are defined by the user. Custom functions are preceded by the pound sign (#).

Click  $\checkmark$  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 <u>56</u> 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.

1	) ș	Preview Data	base					×
		ACCOUNT	DIVISION	STORE	BALANCE	DUEDATE		~
	1	S0000041943	0087	0003	260.97	1/2/2008		
1	2	S0000039709	0139	0004	306.41	1/12/2008		
0	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		
1	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		
1	12	S0000459955	9045	0005	902.66	3/1/2008		
1	13	S0000008572	0028	0006	12.61	3/2/2008		
1	4.4	\$000000111E	0000	0000	420.04	20000		×
					Save	Print	Done	

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.

Column Settings General Printer				
Filter on All fields Character fields Date fields Numeric fields Time fields	Alignment O Left O Style	Center	Right ency symbol sands separator practer fields	
DIVISION STORE BALANCE DUEDATE AGED_DAYS AGED_INT AGE_LE_0 AGE_LE_0 AGE_LE_60 AGE_LE_60 AGE_LE_10 AGE_LE_120 AGE_LE_150 AGE_LE_150 AGE_LE_150 AGE_LE_180 AGE_G_180 AGE_E0_ERR	Negative format: Date format: Width (pixels): Font: Text color: Background color:	wrap cne           Wrap cne           Hide field           -1.00           1996/12/03           1	(s)	<ul> <li>✓</li> <li>✓</li> <li>✓</li> </ul>
		(	ок	Help

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.

STURE/A + DUEL	JATE/A		×	
Field	1	Direction	Delete Key	
DUEDATE		Ascending		

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**.

STORE DUEDATE	<ul> <li>Count records in break</li> <li>Show break line</li> <li>Show leading break</li> <li>Break spacing: 1 Line</li> </ul>	▼ BALANCE         ▲ AGED_DAYS         ▲ AGE_LE_0         ▲ AGE_LE_30         ▲ AGE_LE_60         ▼         Show shading         ♥ Use currency symbol         Text:         ■ Background:         ▼
------------------	--	---

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**.

Report Assist	ant - Header/Footer			X
Print cover	r page			
Title:	Accounts Receivable in Exce	is of 180 Days		
Comments:				~
Prepared by:	Carol		Cove	r Page Font
Header:	AR > 180 Days by Store	Date:	Lower left	*
Footer:		Time:	Lower right	*
			Heade	r/Footer Font
	< Back Next >	Finish	Cancel	Help

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.

🔰 AR	Detail.IMD 🚺	🕽 AR Detail Aging.	IMD 👣 Summ	ary Aging by D	ivision.IMD 🍞 Age Gre	eater Than 180 Days.IMD	TAR Over 180 Days.IMD	<b>~</b> ×
Print	Next Pag	ge Prev Page	1-2 Pages	Zoom In	Zoom Out Close	)		
Г					Case Studyfor IDEA 12-31-2008 AR > 180 Days by Store			
Rec	#STORE	ACCOUNT	DIVISION	DUEDATE	AGED_DAYS	BALANCE		_ []
1 2 510	0001 0001 0 <b>RE (2 reco</b>	S0000033082 S0000009163	0139 0028	4/28/2008 5/4/2008	247 241	100.11 209.17		=
		,			_	\$309.28		
570	DRE							_
3 51(	0002 DRF (1 reco	50000032353 wd)	0139	3/30/2008	276	197.21		
					-	\$197.21		
570	DRE							
4 5 7 8 9 10 11 12 13 14 <i>STC</i>	0003 0003 0003 0003 0003 0003 0003 000	\$0000041943 \$0000800394 \$0000043548 \$0000041255 \$0000041255 \$0000041992 \$0000041992 \$0000041970 \$0000036061 \$0000041370 \$0000041374 \$0000041314 \$0000041314	0087 1517 0087 0087 0087 0087 0139 0139 0087 0087 0087	1/2/2008 1/31/2008 2/3/2008 2/6/2008 2/9/2008 3/15/2008 4/7/2008 4/10/2008 4/21/2008 4/21/2008 4/28/2008 4/28/2008	364 335 322 326 291 265 265 265 264 247 247	260,97 254,18 609,12 60,15 48,32 527,65 25,33 497,18 10,00 23,23 317,68		
						\$2,633.81		~

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.

	Incre	ment: 1.000.00			OK
					Eut off
Field to stratify:		>= Lower Limit	< Upper Limit	^	Cuton
BALANCE	1	0.00	1,000.00		Fields
	2	1,000.00	3,000.00		Insert
	3	3,000.00	10,000.00		Bemove
	4	10,000.00	25,000.00		
	5	25,000.00	65,000.00		Lancel
	6	65,000.00	195,000.00		Help
	7				
Fields to total on:	8				
BALANCE	9				
	10				
	11				
	12				
	13				
	14				
	15			~	
Criteria:					
		9			
🗹 Ureate database 🛛 🗹 İnclud	e stratum intervals	[⊻] Create result			

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.

Low Stratum	High Stratum	Num of Records	Sample Size	Fields
	0.00	0	0	Cance
0.00	1000.00	309	14	
1000.00	3000.00	182	8	Help
3000.00	10000.00	218	11	=
10000.00	25000.00	164	8	
25000.00	65000.00	92	5	
65000.00	195000.00	24	3	
195000.00		0	0	-
	Totals:	989	49	~

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.

ACCOUNT	DIVISION	STORE	BALANCE	DUEDATE	STRATUM	STRAT LOW	STRAT HIGH	SAM RECNO	~	II 🕶 Database
\$0000452479	9045	0004	26 364 02	10/11/2008	5	25 000 00	65,000,00	112		
2 \$0000959042	3654	0007	77 507 03	10/26/2008	6	65,000,00	195,000,00	151		Jata
3 \$000000653	0028	0040	9 924 60	11/9/2008	3	3,000,00	10,000,00	184		📒 History
\$0000032094	0139	0004	10.533.09	11/12/2008	4	10.000.00	25.000.00	187		Field Statistics
5 \$000036023	0139	0009	10,109,29	11/12/2008	4	10.000.00	25.000.00	188		🧧 Control Total: 614,534.21
5 S0000452769	9045	0020	1,346,48	11/18/2008	2	1.000.00	3.000.00	192		📒 Criteria
50000039528	0139	0004	1,049.43	11/19/2008	2	1,000.00	3,000.00	193		
S0000800458	1517	0011	846.87	5/22/2008	1	0.00	1,000.00	194		II ▼ Results
9 S0000459169	9045	0005	5,950.24	11/24/2008	3	3,000.00	10,000.00	200		
0 \$0000032672	0139	0004	664.67	5/29/2008	1	0.00	1,000.00	208		I Indices
1 \$0000249453	0087	0009	77,391.40	8/28/2008	6	65,000.00	195,000.00	233		🥒 No index
2 \$0000033494	0139	0004	10,882.17	8/31/2008	4	10,000.00	25,000.00	234		
3 \$0000959049	3654	0011	20,604.05	9/11/2008	4	10,000.00	25,000.00	237		🛛 🔻 Comments
4 S0000455220	9045	0020	2,032.65	10/13/2008	2	1,000.00	3,000.00	251		
5 \$0000500038	1517	0020	1,218.63	10/23/2008	2	1,000.00	3,000.00	256		Add comment
6 S0000143385	0087	0020	4,536.00	10/24/2008	3	3,000.00	10,000.00	259		
7 \$0000459484	9045	0011	26,860.55	10/27/2008	5	25,000.00	65,000.00	260		
8 \$0000242980	0087	0006	30,000.00	10/27/2008	5	25,000.00	65,000.00	263		
9 \$0000144058	0087	0020	6,769.90	10/27/2008	3	3,000.00	10,000.00	264		
0 \$0000452430	9045	0004	590.07	11/6/2008	1	0.00	1,000.00	283		
1 \$0000400695	9045	0002	249.00	11/6/2008	1	0.00	1,000.00	290		
2 \$0000452003	9045	0004	24,871.69	11/7/2008	4	10,000.00	25,000.00	304		
3 S0000245281	0087	0004	27,170.91	11/13/2008	5	25,000.00	65,000.00	342		
4 S0000459206	9045	0009	4,534.28	11/13/2008	3	3,000.00	10,000.00	343		
5 S0000459181	9045	0011	2,589.65	11/13/2008	2	1,000.00	3,000.00	351		
6 S0000401259	9045	0011	82.75	11/20/2008	1	0.00	1,000.00	397		
7 S0000749497	0087	0006	15,000.00	11/24/2008	4	10,000.00	25,000.00	446		
3 S0000001171	0028	0010	2,024.87	11/30/2008	2	1,000.00	3,000.00	506		
9 \$0000008799	0028	8000	414.97	11/30/2008	1	0.00	1,000.00	512		
S000006922	0028	0001	5,118.88	12/1/2008	3	3,000.00	10,000.00	533		
1 \$0000408591	9045	0009	11.00	12/1/2008	1	0.00	1,000.00	543	~	

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.

🖬 💩 🗐 🇞 • 🕯	•7 -					
talled on: BALANCE	-					
Stratum #	>= L Limit	< U Limit	# Records	(%) # Records	BALANCE	(%) BALANCE
1	0.00	1,000.00	309	31.24	101,042.39	1.0
2	1,000.00	3,000.00	<u>182</u>	18.40	333,347.64	3.3
3	3,000.00	10,000.00	<u>218</u>	22.04	1,323,332.01	13.2
4	10,000.00	25,000.00	<u>164</u>	16.58	2,446,873.89	24.5
5	25,000.00	65,000.00	92	9.30	3,701,696.97	37.1
6	65,000.00	195,000.00	<u>24</u>	2.43	2,059,855.06	20.6
		Lower limit exceptions:	0	0.00	0.00	0.0
		Upper limit exceptions:	0	0.00	0.00	0.0
		Totals:	989	100.00	9,966,147.96	100.0

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 it 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.

Summariz	ation		
Fields to su	mmarize:	Numeric fields to total:	
By:	STORE	BALANCE	ОК
Then by:	NONE		Fields
Then by:			
Then by:			
Then by:			Help
Then by:			
Then by:			
Then by:			
Criteria:		Statistics to include:	
🗖 Use Q	uick Summarization	V Count Average	
Create	database		
🗌 Inc	lude % in output database	Misimum	
() Ha	e fields from first occurrence		
OUse	e fields from last occurrence	✓ Create result	
File na	me: AR Summary by Store	Result name: Summarization	

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.

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

		Address.IMD												<b>•</b> 3	×
		ACCOUNT 🔺			NA	ME1				NAME2			STR	FFT 🛛	Į
F	iel	d Manipulatio	m												ł
			_		-		-							$\square$	1
		Field Name	9	1	ype	Len	Dec	Paramet	er T	'ag Name		Description	<u> </u>	ОК	I
	2	DIVISION		<u>Charact</u>	<u>er</u>	10			<u>&lt;</u>	<u>No taq&gt;</u>				Append	I
	З	STORE		Charact	er	7			<	<u>No tag&gt;</u>					I
	4	BALANCE		Numeri	1	8	2		<	<u>No tag&gt;</u>				Delete	I
	5	DUEDATE		Date		8		YYYYMMDD	<	<u>No taq&gt;</u>				Print	I
	6	STRATUM		Numeri		8	0		<	No tag>	Stratu	m interval - BAL	ANCE		I
	7	STRAT_LOW		Numeri		8	2		<	No tag>				Сору	I
	8	STRAT_HIGH		Numeri		8	2		<	No tag>				Cancel	I
	9	SAM RECNO		Numeri		8	0		<	No tag>	Record	d number in orio	ainal da		l
		_											~	Help	ł
1															
-															l
_		AR Stratified	Ran	idom Sa	mple.I	]								• :	×
		AR Stratified	l Ran Di	i <b>dom 5</b> a √ISION	mple.I STORE	BAL	ANCE	DUEDATE	STRATUM	STRAT	LOW	STRAT_HIGH	SAM_RECNO	 	×
	I S	AR Stratified ACCOUNT	<b>i Ran</b> Di <sup>1</sup> 9045	i <b>dom Sa</b> √ISION 5	mple.I STORE	BAL 26,	ANCE 364.02	DUEDATE 10/11/2008	STRATUM	STRAT_ 5 25,0	_LOW	STRAT_HIGH 65,000.00	SAM_RECNO	-	×
	1 S 2 S	AR Stratified ACCOUNT 00000452479 0000959042	I Ran Di <sup>s</sup> 9045 3654	i <b>dom Sa</b> VISION 5 4	mple.I STORE 0004 0007	BAL 26,: 77,	ANCE 364.02 507.03	DUEDATE 10/11/2008 10/26/2008	STRATUM 5	STRAT. 5 25,0 5 65,0	_LOVV 100.00	STRAT_HIGH 65,000.00 195,000.00	SAM_RECNO 112 151		×
1	1 S 2 S 3 S	AR Stratified ACCOUNT 0000452479 0000959042 0000000653	<b>Ran</b> Di <sup>1</sup> 9045 3654 0028	<b>Idom Sa</b> VISION 5 4 3	mple.I STORE 0004 0007 0040	BAL 26, 77, 9,	ANCE 364.02 507.03 924.60	DUEDATE 10/11/2008 10/26/2008 11/9/2008	STRATUM 5 6 3	STRAT, 5 25,0 5 65,0 3 3,0	_LOVV )00.00 )00.00	STRAT_HIGH 65,000.00 195,000.00 10,000.00	SAM_RECNO 112 151 184	-	×
1	1 S 2 S 3 S	AR Stratified ACCOUNT 0000452479 0000959042 0000000653 00000032094	I Ran Di <sup>1</sup> 9045 3654 0028 0139	i <b>dom Sa</b> VISION 5 4 3 9	mple.I STORE 0004 0007 0040 0004	BAL 26, 77, 9, 10,	ANCE 364.02 507.03 924.60 533.09	DUEDATE 10/11/2008 10/26/2008 11/9/2008 11/12/2008	STRATUM 5 6 3 4	STRAT, 5 25,0 5 65,0 3 3,0 4 10,0	_LOVV 100.00 100.00 100.00	STRAT_HIGH 65,000.00 195,000.00 10,000.00 25,000.00	SAM_RECNO 112 151 184 187		×
1 2 3 4	1 S 2 S 3 S 4 S 5 S	AR Stratified Account 0000452479 0000959042 0000000653 00000032094 00000036023	9045 3654 0028 0139	i <b>dom Sa</b> VISION 5 4 9 9	STORE 0004 0007 0040 0004 0004 0004	BAL 26, 77, 9, 10, 10,	ANCE 364.02 507.03 924.60 533.09 109.29	DUEDATE 10/11/2008 10/26/2008 11/9/2008 11/12/2008 11/12/2008	STRATUM 5 6 3 4 4	STRAT, 5 25,0 5 65,0 3 3,0 4 10,0 4 10,0	_LOW 000.00 000.00 000.00 000.00	STRAT_HIGH 65,000.00 195,000.00 10,000.00 25,000.00 25,000.00	SAM_RECNO 112 151 184 187 188		×
	1 S 2 S 3 S 4 S 5 S 5 S	AR Stratified ACCOUNT 0000452479 0000959042 000000653 0000032094 0000036023 00000452769	0028 0139 0139 0139	<b>Idom Sa</b> VISION 5 4 3 9 9 5	STORE 0004 0007 0040 0004 0004 0009 0020	BAL 26, 77, 9, 10, 10, 10,	ANCE 364.02 507.03 924.60 533.09 109.29 346.48	DUEDATE 10/11/2008 10/26/2008 11/9/2008 11/12/2008 11/12/2008 11/12/2008	STRATUM 5 6 3 4 4 4 2	STRAT 5 25,0 5 65,0 3 3,0 4 10,0 4 10,0 2 1,0	_LOVV )00.00 )00.00 )00.00 )00.00 )00.00	STRAT_HIGH 65,000.00 195,000.00 10,000.00 25,000.00 25,000.00 3,000.00	SAM_RECNO 112 151 184 187 188 192		×
1 2 3 4 6 7	1 S 2 S 3 S 4 S 5 S 5 S	AR Stratified ACCOUNT 0000452479 0000959042 000000653 0000032094 0000036023 00000452769 0000039528	0139 0139 0139 0139 0139	dom Sa VISION 5 4 3 9 9 9 5 5 9	STORE           0004           0007           0040           0004           0004           0004           0004           0004           0004           0004           0004           0004           0009           0020           0004	BAL 26, 77, 9, 10, 10, 1, 1,	ANCE 364.02 507.03 924.60 533.09 109.29 346.48 049.43	DUEDATE 10/11/2008 10/26/2008 11/9/2008 11/12/2008 11/12/2008 11/18/2008 11/19/2008	STRATUM E G G G G G G G G G G G G G G G G G G	STRAT, 5 25,0 5 65,0 3 3,0 4 10,0 4 10,0 2 1,0 2 1,0	_LOW 000.00 000.00 000.00 000.00 000.00 000.00	STRAT_HIGH 65,000.00 195,000.00 25,000.00 25,000.00 3,000.00 3,000.00	SAM_RECNO 112 151 184 187 188 192 193		×
	1 S 2 S 3 S 4 S 5 S 5 S 5 S	AR Stratified ACCOUNT 0000452479 0000959042 0000000653 0000032094 0000036023 00000452769 0000039528 0000039528	9045 3654 0028 0139 0139 9045 0139	<b>Idom Sa</b> VISION 5 4 3 9 9 9 9 5 5 9 9 7	STORE           0004           0007           0004           0004           0004           0004           0004           0004           0004           0004           0004           0004           0011	BAL 26, 77, 9, 10, 10, 1, 1, 1,	ANCE 364.02 507.03 924.60 533.09 109.29 346.48 049.43 846.87	DUEDATE 10/11/2008 10/26/2008 11/12/2008 11/12/2008 11/12/2008 11/18/2008 11/19/2008 5/22/2008	STRATUM 5 6 3 4 4 4 2 2 2 1	STRAT, 5 25,0 5 65,0 3 3,0 4 10,0 4 10,0 2 1,0 2 1,0 1,0 1,0	_LOW 000.00 000.00 000.00 000.00 000.00 000.00 000.00	STRAT_HIGH 65,000.00 195,000.00 10,000.00 25,000.00 25,000.00 3,000.00 3,000.00 1,000.00	SAM_RECNO 112 151 184 187 188 192 193 194		×
	1 S 2 S 3 S 4 S 5 S 5 S 5 S 5 S 5 S 5 S 5 S 5 S 5 S	AR Stratified ACCOUNT 0000452479 0000959042 000000653 000032094 0000036023 0000452769 0000039528 000009528	9045 365- 0028 0139 9045 0139 9045 0139 1511 9045	dom Sa VISION 5 4 3 9 9 9 9 5 9 7 7 7	STORE           0004           0007           0040           0004           0009           0020           0004           00011           0005	BAL 26,: 77,: 9,; 10,: 10,: 11,: 1,: 1,: 5,:	ANCE 364.02 507.03 924.60 533.09 109.29 346.48 049.43 846.87 950.24	DUEDATE 10/11/2008 10/26/2008 11/9/2008 11/12/2008 11/12/2008 11/18/2008 11/19/2008 5/22/2008 11/24/2008	STRATUM 5 6 3 4 4 4 2 2 2 1 1 5 3	STRAT, 5 25,C 5 65,C 3 3,C 4 10,C 4 10,C 2 1,C 2 1,C 2 1,C 1 3 3 3,C	_LOWV 000.00 000.00 000.00 000.00 000.00 000.00 000.00 000.00	STRAT_HIGH 65,000.00 195,000.00 25,000.00 25,000.00 3,000.00 3,000.00 1,000.00 1,000.00	SAM_RECNO 112 151 184 187 188 192 193 194 200		×
	1 S 2 S 3 S 5	AR Stratified ACCOUNT 0000452479 0000959042 000000653 0000032094 0000036023 00000352769 0000039528 00000459169 0000032672	I Ran 014 3654 0028 0139 0139 9045 0139 1511 9045 0139	dom Sa VISION 5 4 3 9 9 9 9 7 5 9 7 5 9 7	TORE     STORE     0004     0007     0040     0004     0009     0020     0004     0004     00011     0005     0004	BAL 26,: 77,: 9,: 10,: 10,: 11,: 1,: 5,: 5,:	ANCE 364.02 507.03 924.60 533.09 109.29 346.48 049.43 846.87 950.24 664.67	DUEDATE 10/11/2008 10/26/2008 11/9/2008 11/12/2008 11/12/2008 11/18/2008 11/19/2008 5/22/2008 11/24/2008 5/29/2008	STRATUM 6 3 4 2 2 2 1 3 3 1 3	STRAT, 5 25,C 5 65,C 8 3,C 4 10,C 4 10,C 4 10,C 2 1,C 2 1,C 2 1,C 1 3 3,C 1 4	LOW 00.00 00.00 00.00 00.00 00.00 00.00 00.00 00.00 00.00	STRAT_HIGH 65,000.00 195,000.00 25,000.00 25,000.00 3,000.00 3,000.00 1,000.00 1,000.00	SAM_RECNO 112 151 184 187 188 192 193 194 200 208		×
1 2 2 8 7 8 9 1	1 S 2 S 3 S 5	AR Stratified ACCOUNT 0000452479 0000959042 0000030045 0000030523 00000452769 0000039528 00000452769 0000039528 00000459169 0000032672 00000459169	I Ran 9045 3654 0028 0139 9045 0139 9045 0139 0085 0085	adom Sa VISION 5 4 3 9 9 5 9 7 5 9 7 5 9 7 5 9 7	TORE     STORE     0004     0007     0040     0004     0009     0020     0004     0001     0005     0004     0005     0004     0005     0004     0005     0004     0005	BAL 26, 77, 9, 10, 10, 1, 1, 5, 5,	ANCE 364.02 507.03 924.60 533.09 109.29 346.48 049.43 846.87 950.24 664.67 391.40	DUEDATE 10/11/2008 10/26/2008 11/9/2008 11/12/2008 11/12/2008 11/12/2008 5/22/2008 5/22/2008 5/29/2008 8/28/2008	STRATUM 5 6 3 4 4 2 2 2 1 1 3 3 1 1 5 6	STRAT, 5 25,C 5 65,C 8 3,C 4 10,C 4 10,C 4 10,C 2 1,C 2 1,C 2 1,C 2 1,C 1 5 6 65,C 5 65,C	LOW 00.00 00.00 00.00 00.00 00.00 00.00 00.00 0.00 0.00 0.00 0.00	STRAT_HIGH 65,000.00 195,000.00 25,000.00 3,000.00 3,000.00 1,000.00 10,000.00 10,000.00 10,000.00	SAM_RECNO 112 151 184 187 188 192 193 194 200 208 203 203		×
	1 S 2 S 3 S 5	AR Stratified ACCOUNT 0000452479 0000959042 000000653 0000032094 0000032094 0000039528 0000039528 0000039528 0000039528 0000039528 0000032672 00000249453 0000033494	I Ran 9045 365- 0028 0139 0139 9045 0139 9045 0139 0087 0139	adom Sa VISION 5 4 3 9 9 5 9 7 5 9 7 5 9 7 5 9 7	TORE     STORE     0004     0007     0040     0004     0009     00004     0001     0005     0004     0005     0004     0009     0004     0004     0009     0004     0004     0009     0004     0004     0009     0004     0004     0009     0004	BAL 26, 77, 9, 10, 10, 1, 1, 1, 5, 5, 77, 10, 20,	ANCE 364.02 507.03 924.60 533.09 109.29 346.48 049.43 846.87 950.24 664.67 391.40 882.17	DUEDATE 10/11/2008 10/26/2008 11/9/2008 11/12/2008 11/12/2008 11/12/2008 11/12/2008 5/22/2008 8/22/2008 8/28/2008 8/31/2008	STRATUM 5 6 4 4 4 2 2 2 1 1 5 1 1 5 4 4	STRAT, 5 25,C 5 65,C 8 3,C 4 10,C 4 10,C 2 1,C 2 1,C 2 1,C 2 1,C 1 0,C 4 10,C 4 10,C 4 10,C 4 10,C 4 10,C 4 10,C 5 65,C 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	_LOW 000.00 000.00 000.00 000.00 000.00 000.00 000.00 000.00 000.00 000.00	STRAT_HIOH 65,000.00 195,000.00 25,000.00 25,000.00 3,000.00 1,000.00 1,000.00 1,000.00 195,000.00 25,000.00	SAM_RECNO 112 151 184 187 188 192 193 194 200 208 233 234 233 234		×

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.

oin Databases		
Primary database: AR Stratified Ra Number of records: 49 Criteria:	ndom Sample 🛛 🕞	ields OK Cancel Help
Secondary database: Number of records:	S.	elect
File name: Join	M	atch
<ul> <li>Matches only</li> </ul>	O All records in prima	ry file
<ul> <li>Records with no secondary match</li> <li>Records with no primary match</li> </ul>	O All records in both	files

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.

Primary database: AR Stratified Ra Number of records: 49	ndom Sample F	ields OK Cancel
Criteria:		Help
Secondary database: Address Number of records: 981	Si Fi	elect
File name: Join	м	atch
Matches only	O All records in prima	ry file
<u> </u>	○ All 1 : 1 al	<i>a</i> .

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.

Primary	Order	Secondary	OK
CCOUNT (C)	Ascending	ACCOUNT (C)	
			Delete
			Cancel
			Help

Click OK.

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

Join Databases		×
Primary database: AR Stratified Ra Number of records: 49 Criteria:	ndom Sample Fields	OK Cancel Help
Secondary database: Address Number of records: 981	Select Fields	
File name: Confirmations O Matches only O Records with no secondary match	All records in primary file     All records in both files	

#### Click OK.

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

/	🕡 AR Stratified F	Random Samp	ole.IMD 🕤 Co	nfirmations.	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	~
<	0000040000	10000	240.00		0.00	WINDER OF MIL	DO CTOLIN AVE	>

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.

Fiel	d Manipulation						
	Field Name	Туре	Ler	Dec	Parameter	Tag Name	Description
1	ACCOUNT	Character	11			<no tag=""></no>	
2	STORE	Character .	11			<no tag=""></no>	
3	BALANCE	Numeric	8	2		<no tag=""></no>	
4	STRATUM	Numeric	8	0		<no tag=""></no>	Stratum interval - BALANCE
5	STRAT_LOW	Numeric	8	2		<no tag=""></no>	
6	NAME1	Character	33			<no tag=""></no>	
7	STREET	Character	30			<no tag=""></no>	
8	CITYST	Character	25			<no tag=""></no>	
9	ZIP	Character	5			<no tag=""></no>	
10	CONF	Virtual numeric		0		<no tag=""></no>	

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

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

Equation Editor						
Equation Editor           ✓         >	8 🐤 🖹 😭 💭 🕼	EXP	al 🥊	All     Character     Numeric     Date / Time     Matching     Conditional     Financial     Eustom Functions	@Functions @Functions are available for performing more complex operations such as date arithmetic, statistical calculations and text searches. IDEA functions begin with the '@' symbol. They are very similar in style and operation to functions	
Test Equation Record Number:	© Evaluate	Len	Dec		packages such as Microsoft Excel, Lotus 1-2-3, and dBASE. Each <b>@Function</b> calculates a result based upon the	
ACCOUNT	Character	13			parameters passed to	
STORE	Character	7			Parameters are passed	
BALANCE	Numeric	· · · · · · · · · · · · · · · · · · ·			in parentheses. For	
CTDATIM	Numerie				example, @Round	
STRATUM	Numeric .	0			(Amount) will round	
STRAT_LUW	Numeric	8	Y	8	to the pearest whole	
				E La Le Contra	CO CHO NOCI COC MILOIO	10000

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.

quation Editor							8
quation Editor			Image: All       Image: Character       Image: Character       Image: Numeric       Image: All       Image: Character       Image: All       Image: Character       Image: All       Image: Character       Image: Character		Precno     Returns the physical     record number in the     file. The physical record     number of a particular     record would remain the     same even if the file is     indexed and has a     different logical order.     See @recno.  Syntax     @precno()		
Test Equation Record Number: 1	Evaluate			Log10 max		Parameters	
				- min - precno		No parameters required.	
Field	Туре	Len	Dec 🔥	Random		Noto	
ACCOUNT	Character	13		recno		NOLE	
STORE	Character	7		Round	-	It a file has been downloaded from a best	
BALANCE	Numeric	8		seed		computer system into	
STRATUM	Numeric	8		Stratum		two files with half the	
STRAT LOW	Numeric	8		val		fields in each file but a	
<		~~~~	>	Insert Function	)	common hield is not available for joining the	~

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**.

Export Database		X
Records to Select <ul> <li>All</li> <li>Range</li> </ul> Export Details <ul> <li>Database order.</li> </ul>	Starting record number: 1 Ending record number: 49	OK Fields Cancel Help
Export Type		
Export as: Worksheet name:	Microsoft Excel 97 - 2003	
File name:	ments\IDEA\Case Study for IDEA\Confirms.XLS	

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. <u>Note</u>: Make sure you change the print range to current page or page 1.

Save your confirmation letters to a <u>NEW</u> document named **Case Study Confirmations**. Do <u>NOT</u> 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 S000000653 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?
- 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.xIs**) 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:

Product line
Stock number
Location code
Date of last sale
Quantity sold during most recent sale
Number sold in current year
Unit cost
Quantity in inventory according to perpetual inventory
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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