Appendix

4

Sample IDEA Project

© 2017 CCH Incorporated and its affiliates. All rights reserved.

IDEA Payroll Project Introduction

This Appendix presents the step-by-step procedures for working with IDEA and two data files related to the Spotlight problem that follows the introduction to IDEA software, which is found in Chapter 13. To learn how to use IDEA and get started on the IDEA Project, visit *www.caseware.com/IDEACDBook1*. The Tutorial is available to be downloaded at the install screen. If you experience problems with downloading the software or accessing the data files, you may contact: *ideasupport@caseware.com*. This Appendix instructs students on how to download data files from the caseware site that contain payroll information for over 700 employees. The payroll and human resources (HR) databases contain information on the employee's name, social security numbers, hire and termination dates, home address, payroll dates, pay rate, deduction percent, overtime hours, gross pay, dollar amount of total deductions (not each deduction), and net pay. The payroll and HR data for the IDEA fraud analysis is available as a zip file at: *http://ideasupport.caseware.com/public/downloads/datafia.zip*. For assistance with download problems or data files, contact *ideasupport@caseware.com.*

The zip file contains two Excel folders: (1)HR_Master.xlsx and (2) Payroll_Extract.xlsx. The step-by-step instructions in this Appendix explain how to use these files and where to save them on your computer. Check the instruction under "Load Data" as to where to save these files. If you have an older computer, WinZip or 7-Zip (free) can be used to open a compressed zip file. As each of the databases on the website is an Excel file, you will also need MS Excel to open them.

IDEA can provide a check on these examples of payroll fraud. IDEA has the ability to review hundreds of payroll records for duplicate addresses, names, Social Security numbers, account deposits numbers, post office box addresses, suspicious overtime charges, and find ghost employees. Usually the implementation of these procedures begins after there is a fraud, a suspicion of fraud, or as a periodic check.

As you go through the procedures outlined in this Appendix, it is important to try to determine if the reports provide any indication of possible payroll fraud and the type of fraud that may be occurring.

Remember classroom versions of the software and a tutorial are available at: *http://www.caseware.com/IDEACDBook1*

Create a New Project

To facilitate housekeeping, it is recommended that a separate **Project** be used for each audit or investigation. All information relating to the audit, including data files, equations, views or report definitions, import definitions, etc. may be stored in the **Project**.

This exercise will explain how to create a **Project** and enter client information that will be printed on all reports. Note that once a **Project** is set, it remains the active folder until changed.

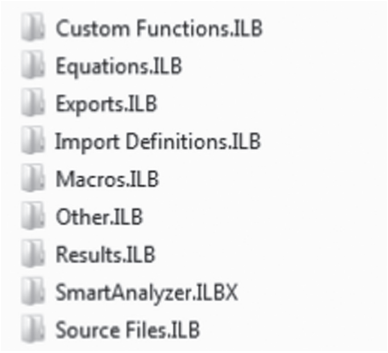
There are two alternatives when creating a new **Project**: **Managed Project** and **External Project.**

Managed Projects are stored in the following location on your computer: **C:\Users\[UserID]\Documents\My IDEA Documents\IDEA Projects**

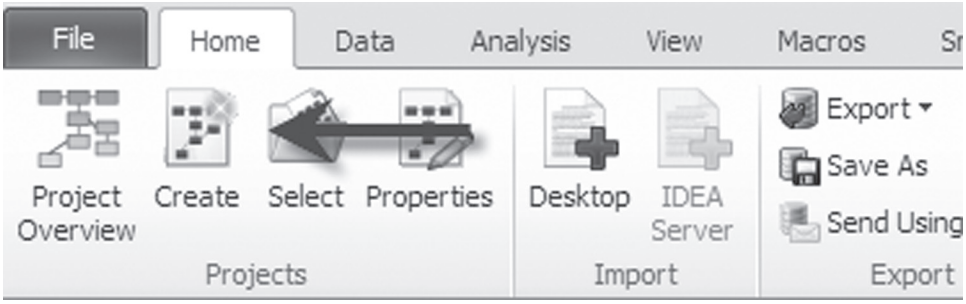
External Projects can be stored at other locations on your computer.

© 2017 CCH Incorporated and its affiliates. All rights reserved.

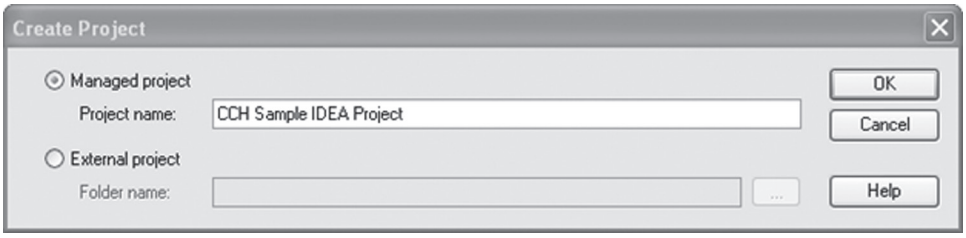
After creating a project you will see that IDEA has created the following project structure:



1. From the IDEA Ribbon, make sure the **Home** tab has been selected and then click **Create**.



2. Select the **Managed project** option and enter **CCH Sample IDEA Project** as the **Project Name.**

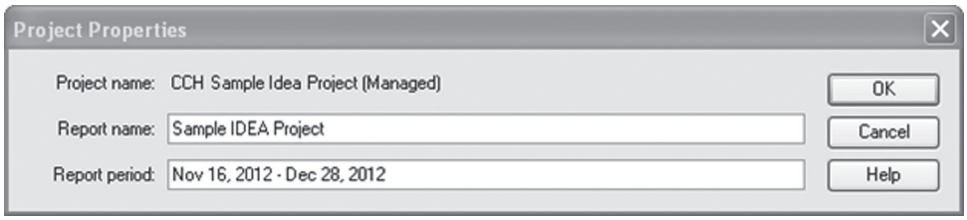


Once you click on **OK,** IDEA will create a new folder called:

C:\Users\[UserID]\Documents\My IDEA Documents\IDEA Projects\Sample IDEA Project

3. From the **Home** tab, in the **Projects** group, click **Properties** to change the **Project Properties**.
4. In the **Project Properties** dialog enter the following information:
    - **Report name:** Sample IDEA Project
    - **Report period:** Nov 16, 2012 – Dec 28, 2012

© 2017 CCH Incorporated and its affiliates. All rights reserved.



Click on **OK** to accept the changes.

Load Data

1. Copy the following data files that came with the Workbook:
    - HR_Master.xlsx – contains 201 employees
    - Payroll_Extract.xlsx – contains 774 records and consists of four by-weekly payroll periods. November 16, 2012 through December 28, 2012

to
C:\Users\[UserID]\My IDEA Documents\IDEA Projects\CCH Sample IDEA Project\Source Files.ILB

This is the default location within a Project to store any source files.

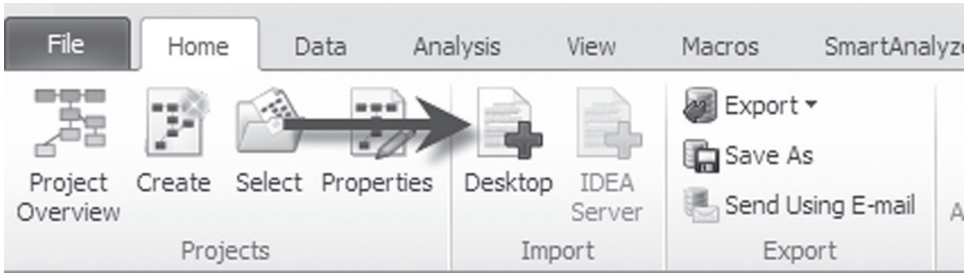
Import the Data

The HR Master and Payroll Extract files are provided as Microsoft Excel worksheets. IDEA will directly import a Microsoft Excel worksheet.

Note: IDEA imports multiple worksheets at one time, producing a separate IDEA database for each.

To import the Microsoft Excel file:

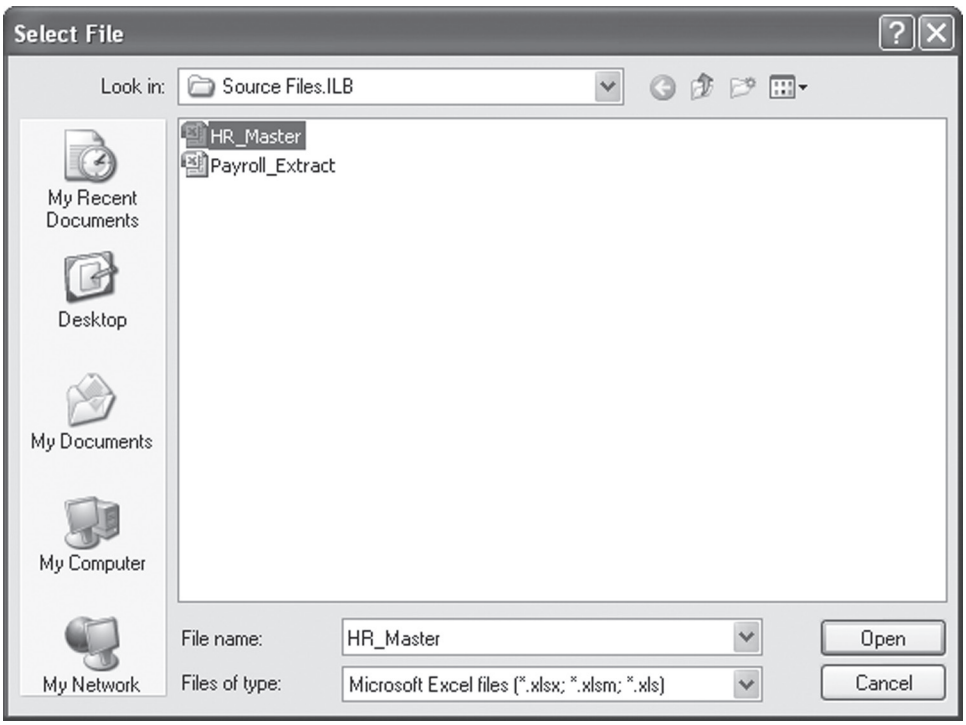
1. From the **Home** tab, in the **Import** group, click **Desktop**.



2. Select **Microsoft Excel** and click the **Browse** button to navigate to and select the file.

3. Select **C:\Users\[UserID]\Documents\My IDEA Documents\IDEA Project\CCH Sample IDEA Project\Source Files.ILB\HR_Master.xlsx.**

© 2017 CCH Incorporated and its affiliates. All rights reserved.



4. Click **Next**.
5. The **Import Assistant** will display a preview of the data and a list of any worksheets defined within the file. Select the **HR_Master** worksheet in the **Select sheets to import** box.
6. Select the **First row is field names** option. In the **Output file name** box, accept the default file name.
7. Click **OK**.

Note: IDEA will name the new database with the prefix that has been supplied during the import followed by the name of the worksheet. For this example, the new database will be called **HR_Master – HR_Master**.

The **HR_Master – HR_Master** database will be imported, opened, and selected as the active database.

HR_Master-HR_Master

	EMP_ID	FIRSTNAME	LASTNAME	SSN	HIREDATE	TERMINATIONDATE	ADDRESS
1	01000030	Kara	Barry	889000031	01/11/2012		430 Hague Avenue
2	01000031	Rosemary	Levine	507003638	06/04/2011		957 Hague Avenue
3	01000065	Alejandro	Long	302001356	27/11/2012		506 White Cowley Drive
4	01000066	Kristina	Conrad	646009954	23/08/2011		31 Nobel Avenue
5	01000086	Zachary	Powers	332001094	10/04/2011	30/11/2012	36 Clarendon Street
6	01000100	Victor	Medina	490007499	21/01/2012		864 West New Street
7	01000101	Abraham	Cline	810006878	02/06/2012		623 White New Blvd.
8	01000135	Vicki	Valenzuela	505008324	15/11/2011		620 Old Way
9	01000136	Phillip	Sexton	688008354	04/10/2012		11 West Green Old Freeway
10	01000170	Armando	Ellison	653007039	15/04/2011		18 New Street
11	01000171	Marla	Brennan	641002577	27/04/2011		881 New Parkway
12	02000001	Stefanie	Buckley	381009335	25/01/2012		85 New Parkway
13	02000034	Lorenzo	Adams	424002358	07/04/2011	30/11/2012	29 Old Road
14	02000036	Kareem	Benton	362003222	28/10/2012		461 White Milton Road
15	02000069	Myron	Rice	271002091	25/09/2011		29 Clarendon Freeway
16	02000071	Laura	Atkinson	975006504	25/07/2011		810 White Fabien Parkway
17	02000104	Jackie	Crosby	319001073	25/01/2011		225 Green New Road
18	02000106	Allen	Small	907001892	02/10/2011		33 Rocky First Parkway
19	02000139	Chasity	Stein	493001320	19/06/2011		255 White First Drive
20	02000141	Tonia	Obrien	156007835	27/03/2012	13/01/2013	149 North Old Road

© 2017 CCH Incorporated and its affiliates. All rights reserved.

Follow the above steps to import the Payroll Extract file.

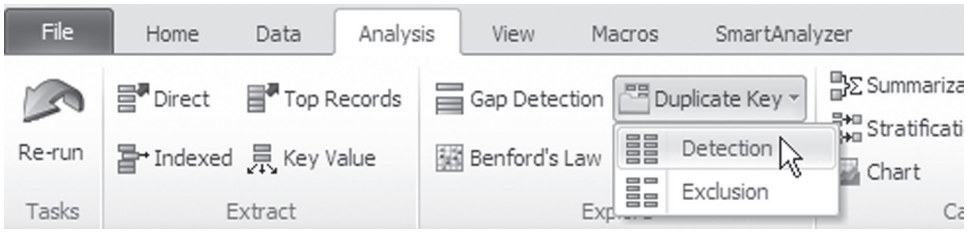
HR_Master-HR_Master | Payroll_Extract-Payroll_Ext...

	EMP_ID	PAYROLLDATE	PAYRATE	DEDUCTIONPCT	OVERTIMEHOURS	GROSSPAY	DEDUCTIONS	NETF
1	04000047	12/28/2012	17.60	0.1250	7	1,592.800	199.100000	1,393.7
2	04000076	11/16/2012	12.16	0.1179	7	1,100.480	129.746592	970.7
3	04000076	11/30/2012	12.16	0.1179	7	1,100.480	129.746592	970.7
4	04000076	12/12/2012	12.16	0.1179	7	1,100.480	129.746592	970.7
5	04000076	12/28/2012	12.16	0.1179	7	1,100.480	129.746592	970.7
6	04000077	11/16/2012	14.81	0.1384	0	1,184.800	163.976320	1,020.8
7	04000077	11/30/2012	14.81	0.1384	0	1,184.800	163.976320	1,020.8
8	04000077	12/12/2012	14.81	0.1384	0	1,184.800	163.976320	1,020.8
9	04000077	12/28/2012	14.81	0.1384	0	1,184.800	163.976320	1,020.8
10	04000078	11/16/2012	14.44	0.2251	0	1,155.200	260.035520	895.1
11	04000078	11/30/2012	14.44	0.2251	0	1,155.200	260.035520	895.1
12	04000078	12/12/2012	14.44	0.2251	0	1,155.200	260.035520	895.1
13	04000078	12/28/2012	14.44	0.2251	0	1,155.200	260.035520	895.1
14	04000079	11/16/2012	18.13	0.2588	0	1,450.400	375.363520	1,075.0
15	04000079	11/30/2012	18.13	0.2588	0	1,450.400	375.363520	1,075.0
16	04000079	12/12/2012	18.13	0.2588	0	1,450.400	375.363520	1,075.0
17	04000079	12/28/2012	18.13	0.2588	0	1,450.400	375.363520	1,075.0
18	04000080	11/16/2012	17.31	0.3371	0	1,384.800	466.816080	917.9
19	04000080	11/30/2012	17.31	0.3371	0	1,384.800	466.816080	917.9
20	04000080	12/12/2012	17.31	0.3371	0	1,384.800	466.816080	917.9

Close all databases.

Identifying Employees with the Same Social Security Numbers

1. Open the **HR_Master** database.
2. From the **Analysis** tab, click **Duplicate Key** and then **Detection.**



3. There are two options for duplicate testing: **Output duplicate records** or **Output records without duplicates**. For this test, select **Output duplicate records** to get a database containing any records that are duplicated.
4. Consider which field or fields should be tested for duplication (a maximum of 8 fields may be selected). In this case, duplicate SS#s. Click the **Key** button and select **SSN – Ascending**. Click **OK**.
5. Name the file **Duplicate SSNs**.
6. Click **OK.**

HR_Master-HR_Master | Duplicate SSNs

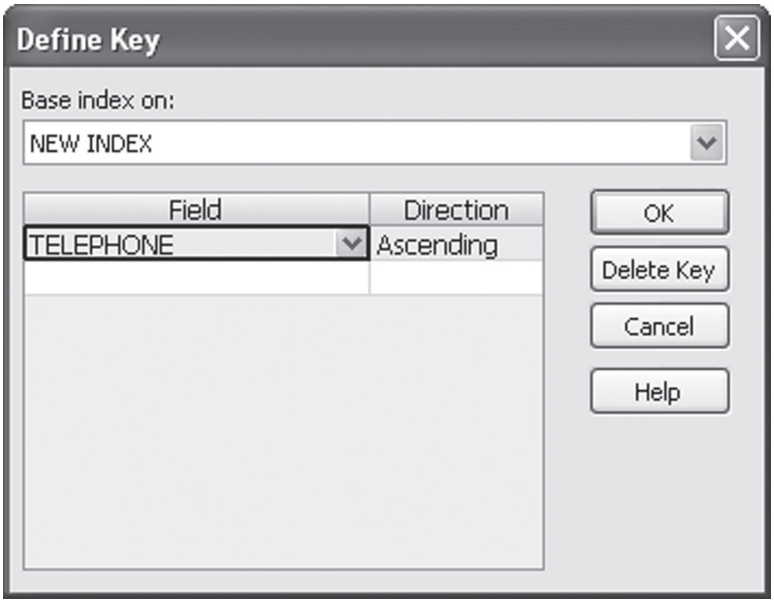
	EMP_ID	FIRSTNAME	LASTNAME	SSN	HIREDATE
1	05000062	Elton	Ali	121009405	23/08/2011
2	05000123	Elton	Ali C	121009405	23/08/2011
3	01000086	Zachary	Powers	332001094	10/04/2011
4	06000027	Shane	Wiley	332001094	01/11/2012

7. Close all databases.

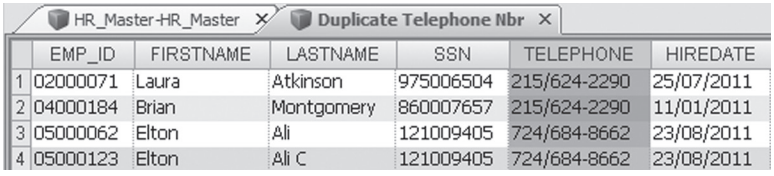
© 2017 CCH Incorporated and its affiliates. All rights reserved.

Identifying Employees with the Same Telephone Numbers

1. Open the **HR_Master** database.
2. From the **Analysis** tab, click **Duplicate Key** and then **Detection.**
3. When the **Duplicate Key** Detection dialog box opens, select **Output duplicate records** to get a database containing any records that are duplicated.
4. Consider which field or fields should be tested for duplication (a maximum of 8 fields may be selected). In this case, duplicate telephone #s. Click the **Key** button and select **TELEPHONE - Ascending**. Click **OK.**



5. Name the file **Duplicate Telephone Nbr**.
6. Click **OK**.



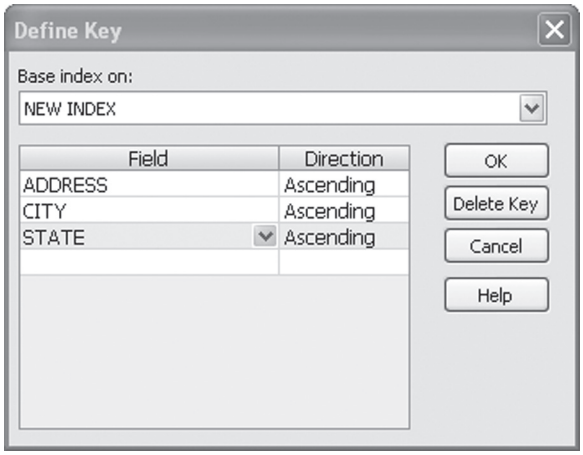
	EMP_ID	FIRSTNAME	LASTNAME	SSN	TELEPHONE	HIREDATE
1	02000071	Laura	Atkinson	975006504	215/624-2290	25/07/2011
2	04000184	Brian	Montgomery	860007657	215/624-2290	11/01/2011
3	05000062	Elton	Ali	121009405	724/684-8662	23/08/2011
4	05000123	Elton	Ali C	121009405	724/684-8662	23/08/2011

7. Close all databases.

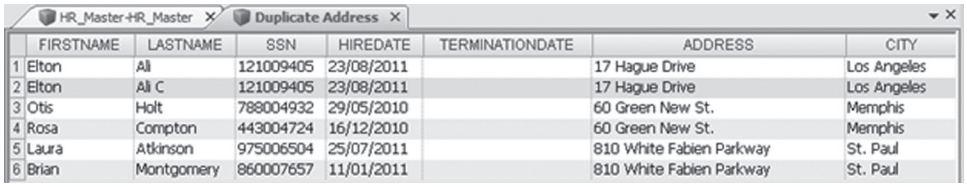
Identifying Employees with the Same Address

1. Open the **HR_Master** database.
2. From the **Analysis** tab, click **Duplicate Key** and then **Detection.**
3. When the **Duplicate Key** Detection dialog box opens, select **Output duplicate records** to get a database containing any records that are duplicated.
4. Consider which field or fields should be tested for duplication (a maximum of 8 fields may be selected). In this case, duplicate addresses. Click the **Key** button and select **ADDRESS – Ascending**, then **CITY – Ascending**, and then **STATE - Ascending**. Click **OK.**

© 2017 CCH Incorporated and its affiliates. All rights reserved.



5. Name the file **Duplicate Address**.
6. Click **OK**.



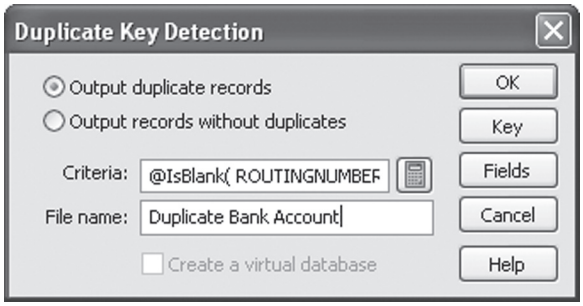
HR_Master:HR_Master | Duplicate Address

	FIRSTNAME	LASTNAME	SSN	HIREDATE	TERMINATIONDATE	ADDRESS	CITY
1	Elton	Ali	121009405	23/08/2011		17 Hague Drive	Los Angeles
2	Elton	Ali C	121009405	23/08/2011		17 Hague Drive	Los Angeles
3	Otis	Holt	788004932	29/05/2010		60 Green New St.	Memphis
4	Rosa	Compton	443004724	16/12/2010		60 Green New St.	Memphis
5	Laura	Atkinson	975006504	25/07/2011		810 White Fabien Parkway	St. Paul
6	Brian	Montgomery	860007657	11/01/2011		810 White Fabien Parkway	St. Paul

7. Close all databases.

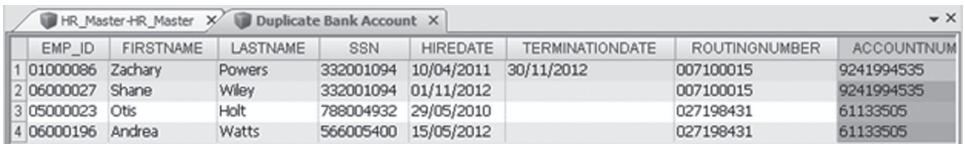
Identifying Employees with the Same Bank Account

1. Open the **HR_Master** database.
2. From the **Analysis** tab, click **Duplicate Key** and then **Detection.**
3. When the **Duplicate Key** Detection dialog box opens, select **Output duplicate records** to get a database containing any records that are duplicated.
4. Consider which field or fields should be tested for duplication (a maximum of 8 fields may be selected). In this case, duplicate addresses. Click the **Key** button and select **ROUTINGNUMBER – Ascending**, then **ACCOUNTNUMBER – Ascending.** Click **OK.**
5. Add **Criteria** by clicking on the **Equation Editor** and inputting the formula "**@ISBlank(ROUTINGNUMBER) = 0**".



6. Name the file **Duplicate Bank Account**.
7. Click **OK**.

© 2017 CCH Incorporated and its affiliates. All rights reserved.

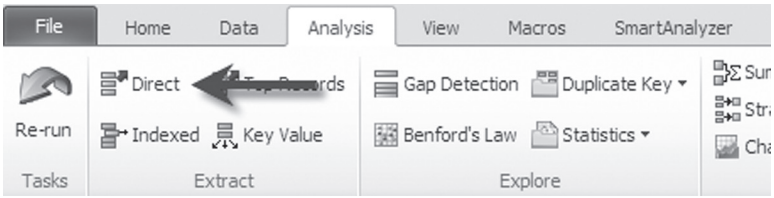


	EMP_ID	FIRSTNAME	LASTNAME	SSN	HIREDATE	TERMINATIONDATE	ROUTINGNUMBER	ACCOUNTNUM
1	01000086	Zachary	Powers	332001094	10/04/2011	30/11/2012	007100015	9241994535
2	06000027	Shane	Wiley	332001094	01/11/2012		007100015	9241994535
3	05000023	Otis	Holt	788004932	29/05/2010		027198431	61133505
4	06000196	Andrea	Watts	566005400	15/05/2012		027198431	61133505

8. Close all databases.

Identifying Employees without Deductions

1. Open the **HR_Master** database.
2. Select the **Direct Extraction** task by clicking on the relevant button on the **Analysis** tab.

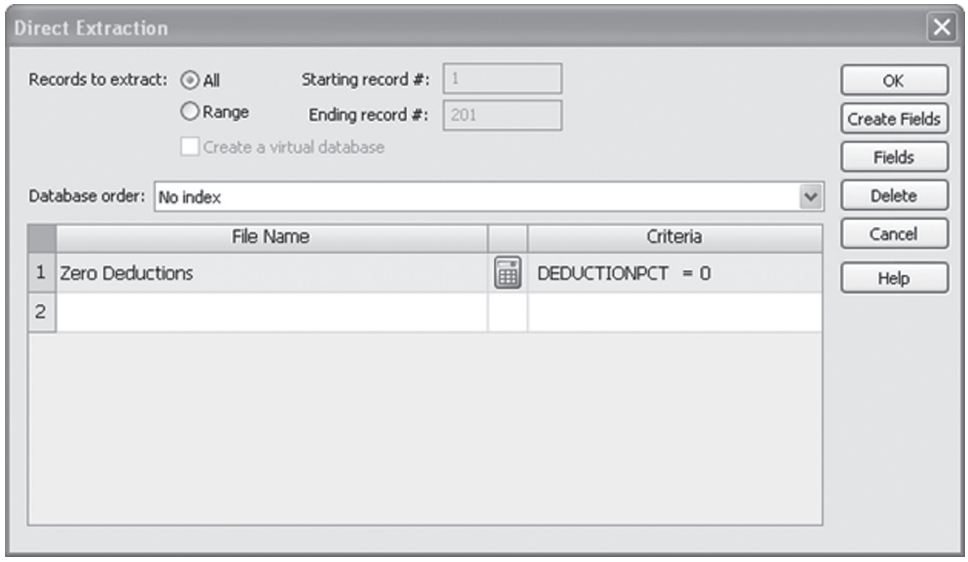


The **Direct Extraction** dialog box appears.

3. In the **File Name** field, enter **Zero Deductions**
4. Click the **Equation Editor** button.

The Equation Editor will appear and is used to enter the required equation:

"DEDUCTIONPCT = 0".



5. Click **OK**.

	EMP_ID	FIRSTNAME	LASTNAME	SSN	HIREDATE	TERMINATIONDATE	DEDUCTIONPCT	ADDRE
1	06000128	Howard	Black	623009459	03/05/2012		0.00	888 Hague Freeway

6. Close all databases.

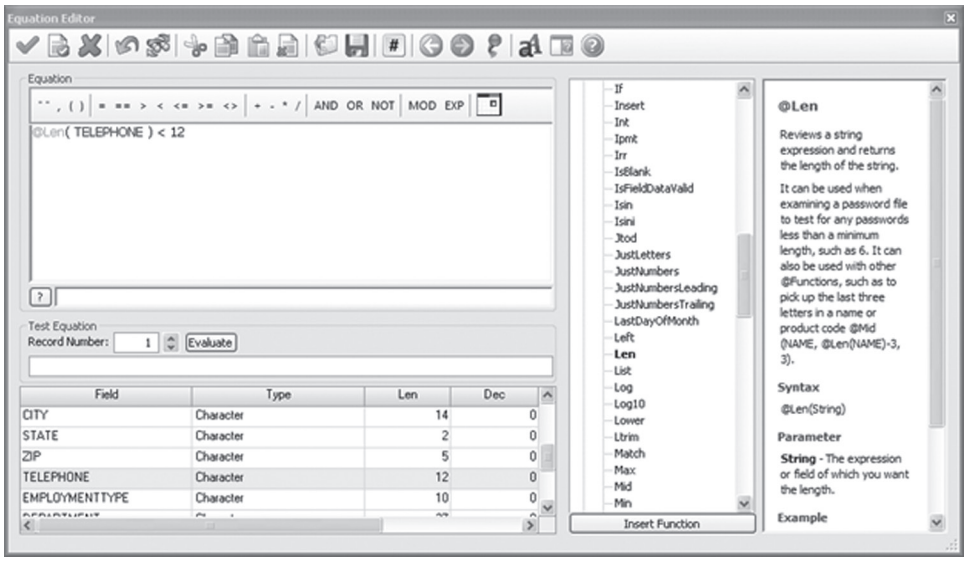
© 2017 CCH Incorporated and its affiliates. All rights reserved.

Identifying Employees without or Incomplete Telephone Numbers

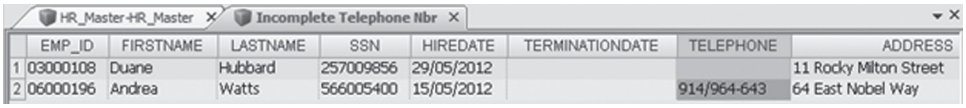
1. Open the **HR_Master** database.
2. Select the **Direct Extraction** task by clicking on the relevant button on the **Analysis** tab. The **Direct Extraction** dialog box appears.
3. In the **File Name** field, enter **Incomplete Telephone Nbr**
4. Click the **Equation Editor** button.

The Equation Editor will appear and is used to enter the required equation:

"@Len(TELEPHONE) < 12".



5. Click **OK**.



6. Close all databases.

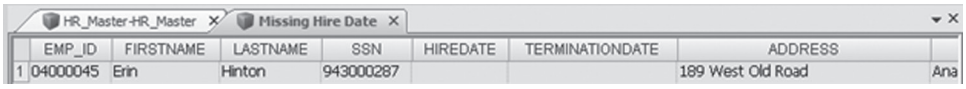
Identifying Employees without a Hire Date

1. Open the **HR_Master** database.
2. Select the **Direct Extraction** task by clicking on the relevant button on the **Analysis** tab. The **Direct Extraction** dialog box appears.
3. In the **File Name** field, enter **Missing Hire Date**.
4. Click the **Equation Editor** button.

The Equation Editor will appear and is used to enter the required equation:
" HIREDATE = """.

5. Click **OK**.

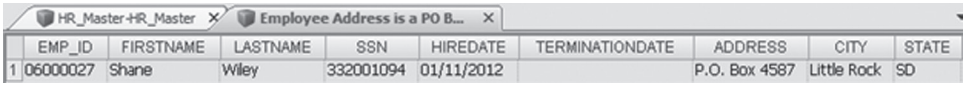
© 2017 CCH Incorporated and its affiliates. All rights reserved.



6. Close all databases.

Identifying Employees Having a PO Box for an Address

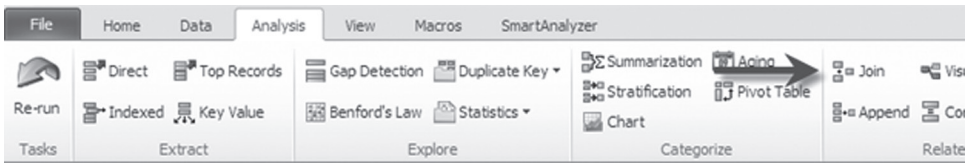
1. Open the **HR_Master** database.
2. From the **Data** tab, in the **Search** group, click **Search**.
3. Fill in the **Search dialog box** as follows:
   - Search: PO or P.O. or Box
   - Match case sensitivity: Do not check
   - Whole word: Do not check
   - Use advanced searching techniques: Check off
   - Fields to look in: "HR Master – ADDRESS"
   - Create an extraction database: Check off and name file **Employee Address is a PO Box**
4. Click **OK**.



5. Close all databases.

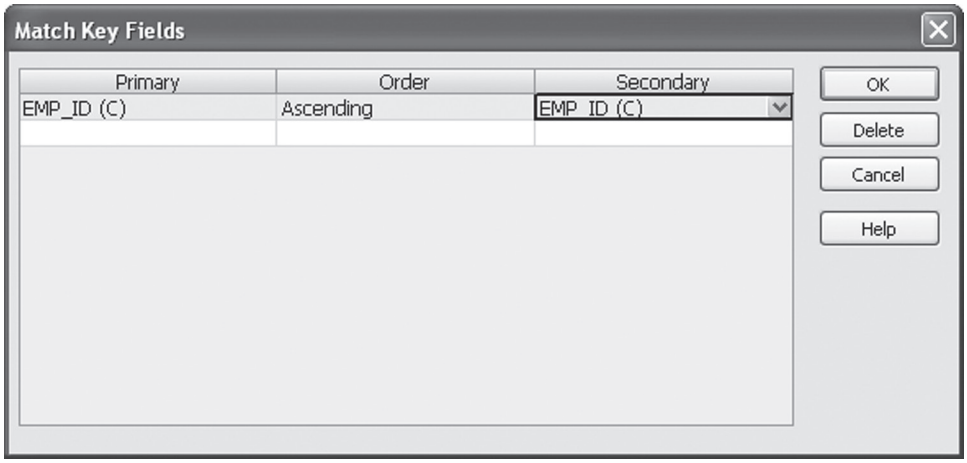
Joining Payroll with HR Master

1. Open the **Payroll Extract** database.
2. From the **Analysis** tab, in the **Relate** group, click **Join**.



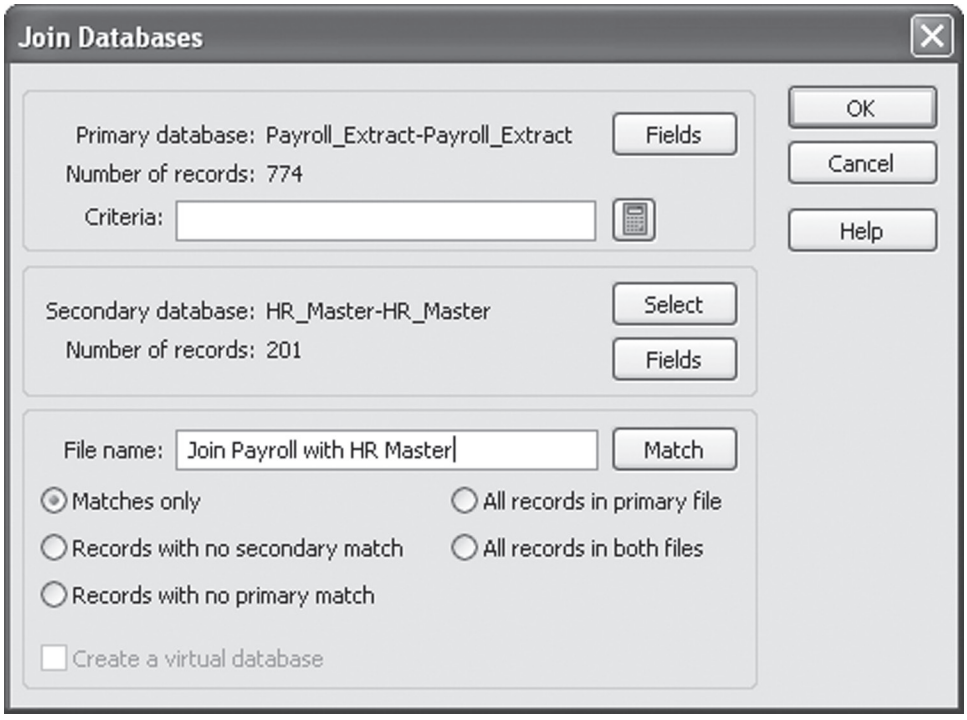
3. The **Join Databases** dialog box appears with the details of the **Primary database** in the top section.
4. Specify the **Secondary database** as follows: click **Select**. The **Select Database** dialog box appears. Select the **HR Master** database and then click **OK**.
5. Change the **File name** in the lower section of the **Join databases** dialog box to **Join Payroll with HR Master**.
6. Specify the common match key by clicking on **Match** to display the **Match Key Fields** dialog box.
7. Click the **Primary** text box and select **EMP ID** from the list of fields. Note the **Order** text box and accept the default, **Ascending**. Click the **Secondary** text box and select **EMP ID** from the list of fields. Click **OK**.

© 2017 CCH Incorporated and its affiliates. All rights reserved.

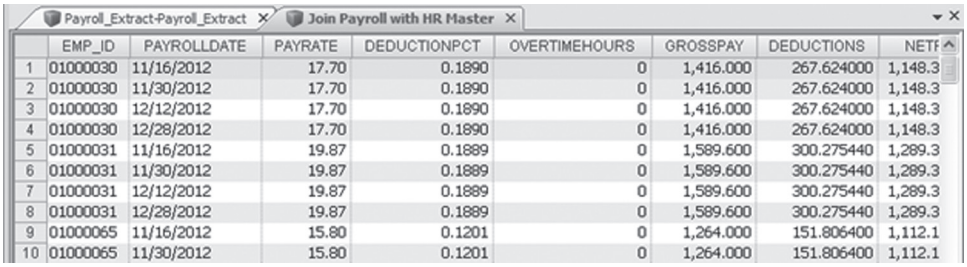


8. There are 5 join options at the bottom of the screen. Select the option: **Matches Only**.

The **Join Databases** dialog box should appear as in the screen below.



9. Click **OK**.



	EMP_ID	PAYROLLDATE	PAYRATE	DEDUCTIONPCT	OVERTIMEHOURS	GROSSPAY	DEDUCTIONS	NETF
1	01000030	11/16/2012	17.70	0.1890	0	1,416.000	267.624000	1,148.3
2	01000030	11/30/2012	17.70	0.1890	0	1,416.000	267.624000	1,148.3
3	01000030	12/12/2012	17.70	0.1890	0	1,416.000	267.624000	1,148.3
4	01000030	12/28/2012	17.70	0.1890	0	1,416.000	267.624000	1,148.3
5	01000031	11/16/2012	19.87	0.1889	0	1,589.600	300.275440	1,289.3
6	01000031	11/30/2012	19.87	0.1889	0	1,589.600	300.275440	1,289.3
7	01000031	12/12/2012	19.87	0.1889	0	1,589.600	300.275440	1,289.3
8	01000031	12/28/2012	19.87	0.1889	0	1,589.600	300.275440	1,289.3
9	01000065	11/16/2012	15.80	0.1201	0	1,264.000	151.806400	1,112.1
10	01000065	11/30/2012	15.80	0.1201	0	1,264.000	151.806400	1,112.1

© 2017 CCH Incorporated and its affiliates. All rights reserved.

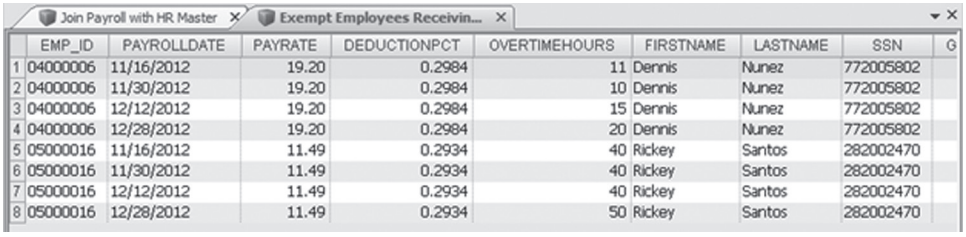
10. Close all databases.

Identifying Exempt Employees with Overtime

1. Open the **Join Payroll with HR Master** database.
2. Select the **Direct Extraction** task by clicking on the relevant button on the **Analysis** tab. The **Direct Extraction** dialog box appears.
3. In the **File Name** field, enter **Exempt Employees Receiving Non-Exempt Pay**.
4. Click the **Equation Editor** button.

The Equation Editor will appear and is used to enter the required equation:
"EMPLOYMENTTYPE = "Exempt" .AND. OVERTIMEHOURS > 0"

5. Click **OK**.

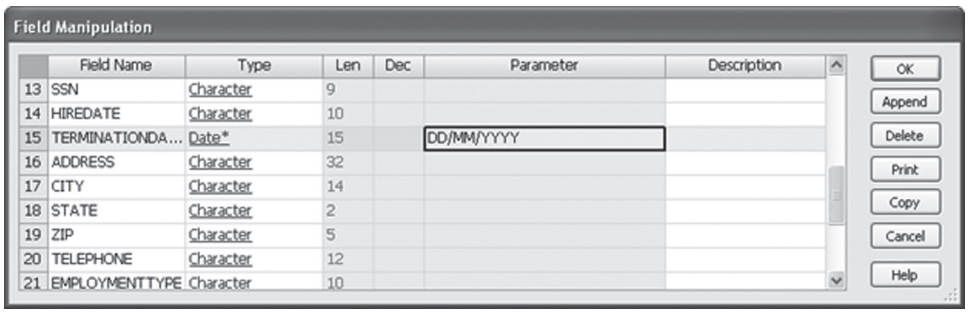


	EMP_ID	PAYROLLDATE	PAYRATE	DEDUCTIONPCT	OVERTIMEHOURS	FIRSTNAME	LASTNAME	SSN	G
1	04000006	11/16/2012	19.20	0.2984	11	Dennis	Nunez	772005802	
2	04000006	11/30/2012	19.20	0.2984	10	Dennis	Nunez	772005802	
3	04000006	12/12/2012	19.20	0.2984	15	Dennis	Nunez	772005802	
4	04000006	12/28/2012	19.20	0.2984	20	Dennis	Nunez	772005802	
5	05000016	11/16/2012	11.49	0.2934	40	Rickey	Santos	282002470	
6	05000016	11/30/2012	11.49	0.2934	40	Rickey	Santos	282002470	
7	05000016	12/12/2012	11.49	0.2934	40	Rickey	Santos	282002470	
8	05000016	12/28/2012	11.49	0.2934	50	Rickey	Santos	282002470	

6. Close all databases.

Identifying Employees Where the Payroll Date is Post Termination Date

1. Open the **Join Payroll with HR Master** database.
2. First we have to make sure our date fields have the same field type. Since TERMINATION-DATE is a character field, we need to append it to a Date field to match the PAYROLLDATE.
3. Double-click anywhere on the database to open the **Field Manipulation dialog box**. Change the field type of **TERMINATIONDATE** to **Date** with a mask of **"DD/MM/YYYY".**



	Field Name	Type	Len	Dec	Parameter	Description
13	SSN	Character	9			
14	HIREDATE	Character	10			
15	TERMINATIONDA...	Date*	15		DD/MM/YYYY	
16	ADDRESS	Character	32			
17	CITY	Character	14			
18	STATE	Character	2			
19	ZIP	Character	5			
20	TELEPHONE	Character	12			
21	EMPLOYMENTTYPE	Character	10			

4. Now we can proceed with the extraction. Select the **Direct Extraction** task by clicking on the relevant button on the **Analysis** tab. The **Direct Extraction** dialog box appears.
5. In the **File Name** field, enter **Employee Payment after Termination**.
6. Click the **Equation Editor** button.

© 2017 CCH Incorporated and its affiliates. All rights reserved.

The Equation Editor will appear and is used to enter the required equation:

"@Dtoc(TERMINATIONDATE , "DD/MM/YYYY") <> "00/00/0000" .AND. PAYROLLDATE > TERMINATIONDATE".

7. Click **OK**.

Join Payroll with HR Master | Employee Payment after Te...

	FIRSTNAME	LASTNAME	GROSSPAY	DEDUCTIONS	NETPAY	PAYMENTTYPE	EMP_ID1	SSN	HIREDA
1	Gene	Yoder	1,317.600	223.333200	1,094.266800	EFT	03000179	464002254	08/09/20:

8. Close all databases.

Consolidating Indicators with Multiple Results per Employee

1. Open the **Exempt Employees Receiving Non-Exempt Pay** database.
2. First we need to append the field type of the TERMINATIONDATE from Character to Date.
3. Double-click anywhere on the database to open the **Field Manipulation dialog box**. Change the field type of **TERMINATIONDATE** to **Date** with a mask of **"DD/MM/YYYY".**
4. Now we can proceed to Appending this database with the **Employee Payment after Termination** database.
5. From the **Analysis** tab, in the **Relate** group, click **Append**.
6. The **Append Databases dialog box** opens. Name the file: **Multiple Results per Employee** and select **Employee Payment after Termination** from the Desktop Project list and then click **add.** Click **OK.**

Exempt Employees Receiving No... | Multiple Results per Employ...

	EMP_ID	PAYROLLDATE	PAYRATE	DEDUCTIONPCT	OVERTIMEHOURS	GROSSPAY	DEDUCTIONS	NETPAY
1	04000006	11/16/2012	19.20	0.2984	11	1,852.800	552.875520	1,299.92448(
2	04000006	11/30/2012	19.20	0.2984	10	1,824.000	544.281600	1,279.71840(
3	04000006	12/12/2012	19.20	0.2984	15	1,968.000	587.251200	1,380.74880(
4	04000006	12/28/2012	19.20	0.2984	20	2,112.000	630.220800	1,481.77920(
5	05000016	11/16/2012	11.49	0.2934	40	1,608.600	471.963240	1,136.63676(
6	05000016	11/30/2012	11.49	0.2934	40	1,608.600	471.963240	1,136.63676(
7	05000016	12/12/2012	11.49	0.2934	40	1,608.600	471.963240	1,136.63676(
8	05000016	12/28/2012	11.49	0.2934	50	1,780.950	522.530730	1,258.41927(
9	03000179	12/28/2012	16.47	0.1695	0	1,317.600	223.333200	1,094.26680(

7. Close all databases.

Summarizing the Multiple Results per Employee Database

1. Open the **Multiple Results per Employee** database.
2. From the **Analysis** tab, in the **Categorize** group, click **Summarization**.
3. In the **Fields to summarize** area, select **EMP_ID**.
4. Accept the option to **Create database**, but do **not** check **Create result** (i.e., report). Name the file: **Multiple Results per Employee Summarization** and then click **OK**.

Multiple Results per Employee | Multiple Results per Employ...

	EMP_ID	NO_OF_RECS
1	03000179	1
2	04000006	4
3	05000016	4

5. View the resultant database and note the **NO_OF_RECS** field (i.e., number of results per employee).
6. You can view the individual results per employee by clicking on the **NO_OF_RECS**.

© 2017 CCH Incorporated and its affiliates. All rights reserved.