



Informatica® SSA-NAME3
10.1

Workbench User Guide

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Preface

This guide provides information on how to use the SSA-NAME3 Developer's Workbench - a Java GUI tool that helps a programmer understand and prototype SSA-NAME3 calls.

This guide is intended for designers, developers and DBA's of SSA-NAME3. The Workbench in itself is not a search and match application. It assists the developer build a search and match application.

Learning About Informatica SSA-NAME3

This section provides details of documentation available with the SSA-NAME3 product.

Introduction to SSA-NAME3

Provides an overview of SSA-NAME3. It is written in a way that can be read by someone who has no prior experience of the product and wants a general overview of SSA-NAME3. It explains the problems SSA-NAME3 overcomes and provides an overview of how this is done. One chapter is dedicated to providing an overview for Application Programmers.

Getting Started

This manual is intended to be the first technical material a new developer or designer reads before installing or using the SSA-NAME3 software, regardless of the platform or environment. Its goal is to help a new user get the software installed and produce a working prototype application that calls SSA-NAME3 and executes searches against their own data.

To achieve this it provides a "script" to follow which includes pointers to pertinent sections of the other manuals.

Application & Database Design

This manual contains tips and techniques useful for setting up and optimizing a name search and matching application, including database issues, and illustrates best-practice techniques, common pitfalls, and strategies regarding the subject of name and address matching.

Installation Guide

This manual provides information on how to install the SSA-NAME3 product.

SSA-NAME3 Workbench User Guide

This is a guide to using the SSA-NAME3 Workbench - a Java GUI tool that helps a programmer understand and prototype SSA-NAME3 calls. The Workbench is also used for:

- Generating Sample Program Code;
- Executing SSA-NAME3 Calls;
- Testing different SSA-NAME3 run-time options;
- Producing debugging and support information for Informatica Corporation

Note: The Workbench in itself is not a search and match application. It assists the developer build a search and match application.

API Reference

The ultimate goal of an SSA-NAME3 implementation is for application programs to be able to call SSA-NAME3's API Functions to build keys and search strategies and to compute match scores and decisions.

This manual describes a typical program process flow for building an identity search application, and also lists in detail each of the API Functions. It describes the parameters required by these functions and the information returned.

Population Override Manager User's Guide

This is a guide to using the SSA-NAME3 Population Override Manager - a Java GUI tool that allows a trained data analyst to override some of the Standard Population rules that are supplied with the product, or provided in the form of a Custom Population. The types of rules that can be overridden using this tool are:

- Edit-list rules
- Frequency tables
- Scalar Frequency Tables
- Matching Purposes

Note: Use of this tool without proper training from Informatica should not be attempted, as improper use can adversely affect the reliability and performance of the search application(s).

Edit Rule Wizard User's Guide

This is a guide to using the SSA-NAME3 Edit Rule Wizard - a Java GUI tool that helps a business user safely add certain types of Edit Rules to the Standard or Custom Population without requiring specific knowledge of SSA-NAME3 or support from a programmer or data analyst. The types of rules that can be added using this tool are:

- Discard a word or phrase when searching and matching (e.g. a new "noise" word)
- Add a new replacement word or phrase when searching and matching (e.g. a new "abbreviation", "nickname" or "acronym")
- Add a new compound name marker word

Release Notes

The Release Notes contain information about what's new in this version of SSA-NAME3. It is also used to summarize any documentation updates as they are published.

What Do I Read If. . .

I am. . .

. . . a business manager

The INTRODUCTION TO SSA-NAME3 will address questions such as "Why have we got SSA-NAME3?", "What does SSA-NAME3 do"?

I am. . .

. . . a system designer or DBA

The INTRODUCTION TO SSA-NAME3 will address questions such as "What resources are needed to implement SSA-NAME3?". The APPLICATION & DATABASE DESIGN manual will lead you through many of the design considerations of name search and matching applications.

I am. . .

. . . installing SSA-NAME3

Before attempting to install SSA-NAME3 you should read the Getting Started document. This will describe the pre-requisites and help you plan the installation and implementation of SSA-NAME3. The actual installation steps for your platform are documented in the Installation Guide.

I am. . .

. . . an Analyst or Application Programmer

A high-level overview is provided specifically for Application Programmers in the INTRODUCTION TO SSA-NAME3 manual. Before attempting to develop programs that interface with SSA-NAME3, you should also read the GETTING STARTED and APPLICATION & DATABASE DESIGN manuals, as well as experimenting with calls in the WORKBENCH USER GUIDE.

When developing the application program(s), use the API REFERENCE manual which describes a typical application and the Function parameters.

Working example programs that illustrate the calls to SSA-NAME3 in various languages are available by using the Sample Program button on the Workbench.

I want to know. . .

. . . what SSA-NAME3 does

The INTRODUCTION TO SSA-NAME3 manual gives an overview of what SSA-NAME3 does and how it does it.

I want to know. . .

. . . how to setup the database

Refer to the APPLICATION & DATABASE DESIGN manual for tips and techniques on configuring the database to store SSA-NAME3 Keys and optimizing it for searching and matching.

I want to know. . .

. . . how to code a search application

The INTRODUCTION TO SSA-NAME3 manual contains a specific section designed to get application programmers familiar with the concepts of developing an SSA-NAME3 search and match application.

The API REFERENCE GUIDE details the Function calls required and their parameters. The SSA-NAME3 WORKBENCH USER GUIDE shows how to generate a sample program in a variety of programming languages.

Informatica Resources

Informatica Network

Informatica Network hosts Informatica Global Customer Support, the Informatica Knowledge Base, and other product resources. To access Informatica Network, visit <https://network.informatica.com>.

As a member, you can:

- Access all of your Informatica resources in one place.
- Search the Knowledge Base for product resources, including documentation, FAQs, and best practices.
- View product availability information.
- Review your support cases.
- Find your local Informatica User Group Network and collaborate with your peers.

Informatica Knowledge Base

Use the Informatica Knowledge Base to search Informatica Network for product resources such as documentation, how-to articles, best practices, and PAMs.

To access the Knowledge Base, visit <https://kb.informatica.com>. If you have questions, comments, or ideas about the Knowledge Base, contact the Informatica Knowledge Base team at KB_Feedback@informatica.com.

Informatica Documentation

To get the latest documentation for your product, browse the Informatica Knowledge Base at https://kb.informatica.com/_layouts/ProductDocumentation/Page/ProductDocumentSearch.aspx.

If you have questions, comments, or ideas about this documentation, contact the Informatica Documentation team through email at infa_documentation@informatica.com.

Informatica Product Availability Matrixes

Product Availability Matrixes (PAMs) indicate the versions of operating systems, databases, and other types of data sources and targets that a product release supports. If you are an Informatica Network member, you can access PAMs at

<https://network.informatica.com/community/informatica-network/product-availability-matrixes>.

Informatica Velocity

Informatica Velocity is a collection of tips and best practices developed by Informatica Professional Services. Developed from the real-world experience of hundreds of data management projects, Informatica Velocity represents the collective knowledge of our consultants who have worked with organizations from around the world to plan, develop, deploy, and maintain successful data management solutions.

If you are an Informatica Network member, you can access Informatica Velocity resources at <http://velocity.informatica.com>.

If you have questions, comments, or ideas about Informatica Velocity, contact Informatica Professional Services at ips@informatica.com.

Informatica Marketplace

The Informatica Marketplace is a forum where you can find solutions that augment, extend, or enhance your Informatica implementations. By leveraging any of the hundreds of solutions from Informatica developers and partners, you can improve your productivity and speed up time to implementation on your projects. You can access Informatica Marketplace at <https://marketplace.informatica.com>.

Informatica Global Customer Support

You can contact a Global Support Center by telephone or through Online Support on Informatica Network.

To find your local Informatica Global Customer Support telephone number, visit the Informatica website at the following link:

<http://www.informatica.com/us/services-and-training/support-services/global-support-centers>.

If you are an Informatica Network member, you can use Online Support at <http://network.informatica.com>.

CHAPTER 1

Introduction

The SSA-NAME3 Developer's Workbench is a Java GUI tool that helps a programmer prototype SSA-NAME3 calls.

The Workbench is also used for:

- Browser-based Help and Documentation
- Generating Sample Program Code
- Executing SSA-NAME3 Calls
- Testing different SSA-NAME3 parameters
- Producing debugging and support information for Informatica Corporation

In order to use the Developer's Workbench, the SSA-NAME3 core modules and Standard Populations should have been installed, either locally, or on another computer/server.

If SSA-NAME3 was installed on another computer/server, you will first need to start the SSA-NAME3 Server process on that computer. To do this, see the *SSA-NAME3 Installation Guide*.

Note that use of the remote calls (i.e. across a network) to the SSA-NAME3 Server is recommended only for development or testing. For production use, your application (or component) should call a local copy of SSA-NAME3, either directly via the DLL or indirectly via a locally running SSA-NAME3 Server or database stored procedure.

CHAPTER 2

Launching the Workbench

This chapter includes the following topics:

- [Overview, 10](#)
- [Launching the Workbench, 10](#)
- [Connecting to SSA-NAME3, 12](#)
- [Selecting a System and Population, 12](#)

Overview

This chapter takes the reader through a step-by-step guide to using the Developer's Workbench.

Launching the Workbench

This section provides information on how to launch the Workbench.

- On a Win32 platform, there will be a **Workbench** icon in the **Start** menu, in the Informatica program group. Once selected, the Workbench entry screen will be displayed.



The **Introduction to SSA-NAME3** button will launch a document that provides a short introduction to SSA-NAME3. It can be read by someone who has no prior experience of the product and wants a general overview about SSA-NAME3. It explains the problems SSA-NAME3 is designed to overcome and the approaches used to do so. There is also a chapter dedicated to providing an overview for Application Programmers.

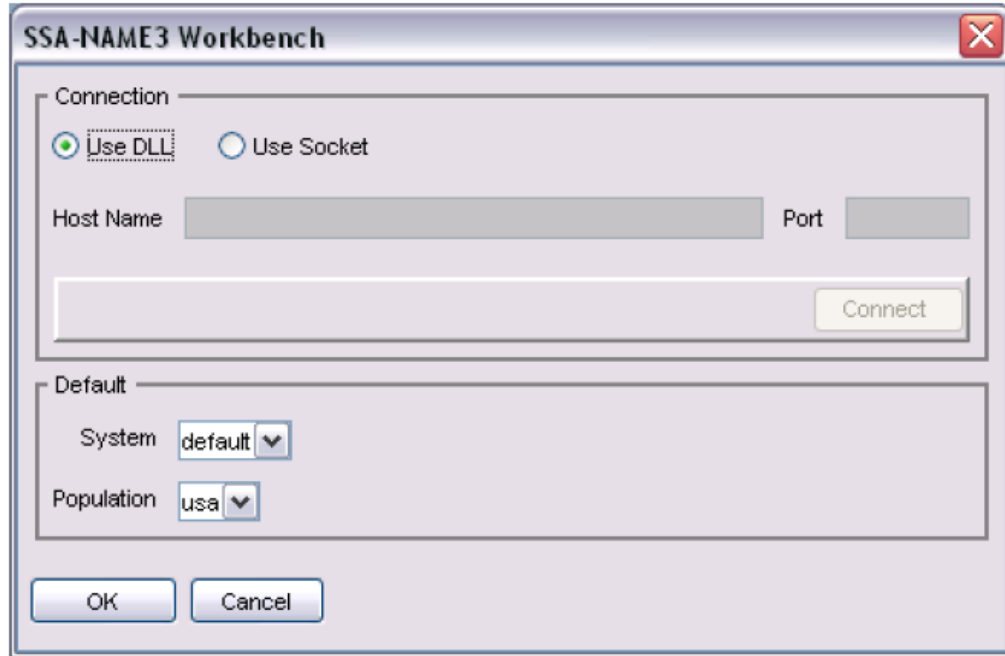
The **Documentation** button will launch SSA-NAME3's technical documentation. This documentation includes links to INTRODUCTION TO SSA-NAME3, GETTING STARTED, INSTALLATION GUIDE, WORKBENCH USER GUIDE, APPLICATION & DATABASE DESIGN, API REFERENCE and RELEASE NOTES.

The **All Systems Information** button will launch a document that lists the available systems and populations that have been installed, along with information about when these were last updated.

The **Workbench** button launches the Workbench connection screen.

Connecting to SSA-NAME3

1. To connect to SSA-NAME3, or load the local DLL, click the **Workbench** button on the Entry Screen. This will launch the connection choice screen:



2. If SSA-NAME3 was installed on another computer/server, you will need to use the Socket connection to connect to the SSA-NAME3 Server. Select **Use Socket** and enter the Host Name and Port.
Note: The default port used by SSA-NAME3 is 1665.
3. If SSA-NAME3 was installed locally, select the **Use DLL** option.

Selecting a System and Population

On the connection screen, also select the System and Population name you wish to work with. The System name is the name of the **pr** sub-directory where the Standard Populations (files with an extensions of **.y_{sp}**) reside. The System called **default** is where the installer copies the Standard Population files from the CD. You may also have one or more Custom Populations (files with an extension of **.y_{cp}**).

It is recommended that you copy the Standard Population Files you will be using into a new **pr** subdirectory. The name of that sub-directory could be a name relating to the business system or project name. It is also recommended to have different directories/systems for different phases in the project development (e.g. **dev**, **test**, **qa**, **production**).

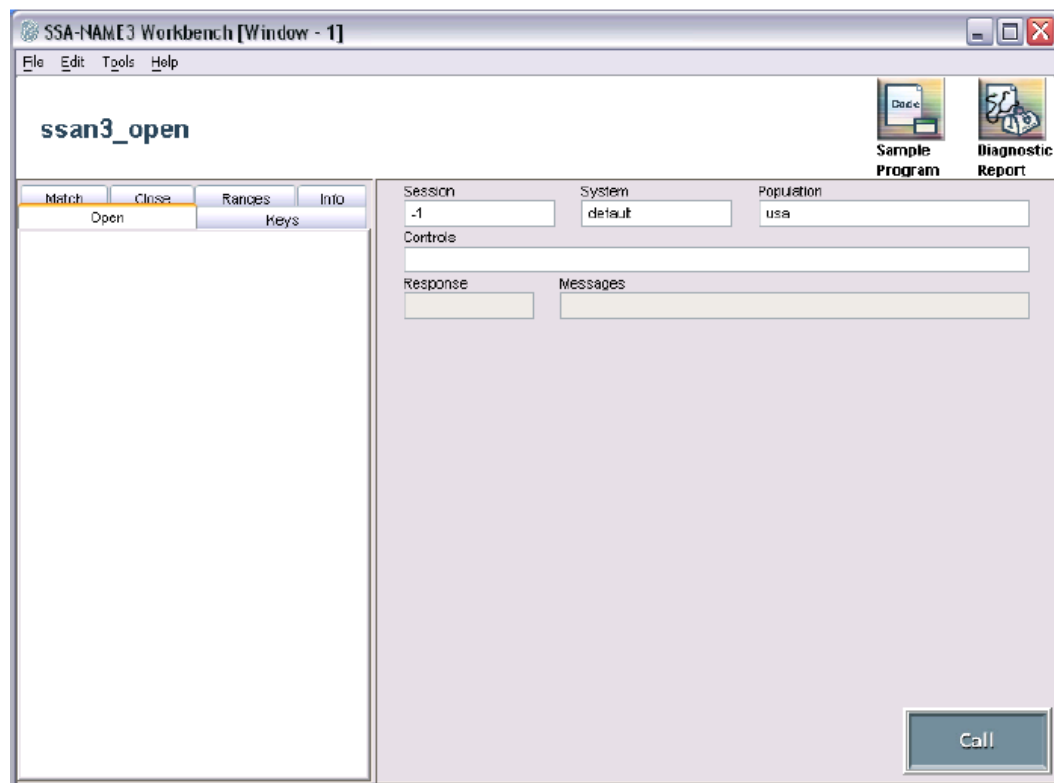
1. The available Populations will be those you chose to install. Select the most suitable Population for your data.
2. Once you are fine that you are specifying the correct system/population, click the **OK** button to continue into the Workbench and its Function Testing Environment.

CHAPTER 3

The Function Testing Environment

The Function Testing Environment of the Workbench is where the actual API functions can be tested. It is also where the Documentation is viewed, and sample programs generated.


The screen below shows the first screen displayed when the Function testing Environment is entered. It is the **ssan3_open** function screen.



General Usage Notes

Using the tabs on the left-hand pane you can select from the six available API Functions (Open, Keys, Ranges, Match, Close, Info). When a tab is clicked, its available input parameters and parameter values will be listed

in the left-hand pane below the tabs. The input parameters are made up of "Controls" to direct what specific action the function will take, and "Data" on which the function will perform its actions. Many of these parameters are "hotspots", meaning that a mouse click will transfer the selected parameter and value into the appropriate text box on the right-hand pane.

If a parameter is a hotspot, the mouse pointer will change to  .

Hovering the mouse cursor over a parameter or parameter value will also display a pop-up description of that field.

When an API function tab is selected, the right-hand pane will change to show all of the function's input and output parameters as text boxes. Input text boxes have a white background. Output text boxes have a grey background. These will be the parameters that are actually used to make the call.

As said in the first paragraph, some of the parameters and values can be easily entered into the text boxes via clicks on the values in the left-hand pane, however, others such as the actual name or address data to be used in a particular function call must be manually typed or cut and pasted into the input text boxes from another location.

Once the text boxes on the right-hand frame are completed, they will closely resemble how you would specify the parameters in your own program code. To execute a function, click on the **Call** button in the lower right-hand corner of the right-hand pane and view the results. It is useful when debugging program code to put in some print or display statements after the call to the SSA-NAME3 function. After running the program to produce some debug output, copy the parameters from the program's function call into the Workbench environment to replicate the function call and check if the output is the same.

The Workbench will remember the results of each function as you move around the different functions. Read the Functions section in the *API Reference Guide* for more detail about each function.

File Menu Options

The **File** menu options are provided as follows:

Options	Description
File > Open New Window	If more than one Workbench screen is required, use the File > Open > New Window menu option. Windows can then be tiled to perform comparison tests between the same function type.
File > Close	Menu option File > Close will prompt to close the current Function Testing Environment session.
File > Exit	Menu option File > Exit will prompt to close and exit all Workbench sessions.

Edit Menu Options

The **Edit** menu options are provided as follows:

Options	Description
Edit > Cut, Edit > Copy, Edit > Paste	The menu options Edit > Cut , Edit > Copy and Edit > Paste are useful to allow copying of Controls and Data from one textbox to another, or between Function screens.
Edit > Clear, Edit > Clear All	Menu option Edit > Clear undoes the previous entry. Menu option Edit > Clear All clears all entries on the current function screen.
Edit > Contact Details	This menu option allows you to enter your contact information. Users are advised to complete this information as it helps Informatica Corporation to communicate with you regarding product features, diagnostics, and technical support. (Informatica Corporation respects your right to privacy. Data collected from this form will not be given, sold or shared with organizations external to Informatica Corporation).

Tools Menu Options

The **Tools** menu options are provided as follows:

Options	Description
Tools > Export Parameters	This menu option allows the parameters and results from the current screen to be saved in an external file. You may wish to do this, for example, to email the results to another developer.

Help Menu Options

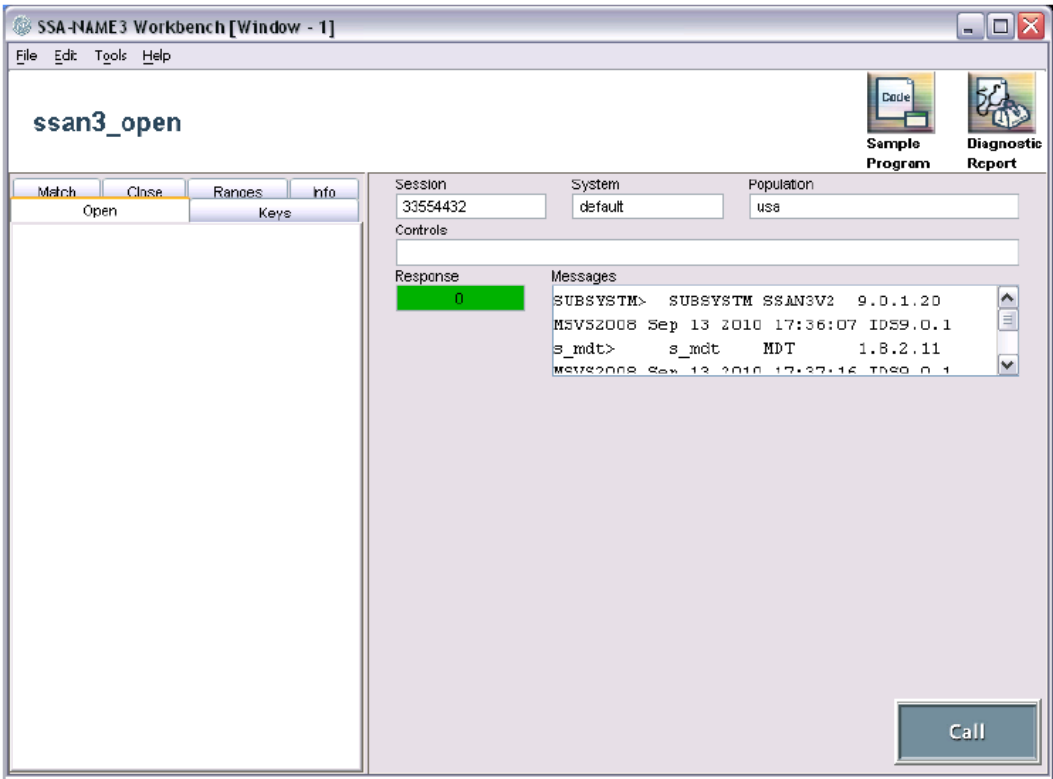
The **Help** menu options are provided as follows:

Options	Description
Help > Overview	Selecting Help > Overview will launch the Documentation Overview manual.
Help > Introduction	Selecting Help > Introduction will launch the Introduction to SSA-NAME3 manual.
Help > API Reference	Selecting Help > API Reference will launch the SSA-NAME3 API REFERENCE manual.
Help > System Documentation	Selecting Help > System Documentation will browse the pr sub-folders ("systems") and display the available Populations in a new window.
Help Population > Documentation	Selecting Help > Population > Documentation will interrogate the current Population and display its internal documentation. This includes information about the Population's version and date, the Code Page(s) used, and the available Field Types, Key Levels, Search Levels, Match Purposes, Match Fields and Match Levels.

ssan3_open

Select the **Open** tab on the left-hand pane and then click the **Call** button. (No Controls are required). This will cause the Workbench to issue an **ssan3_open** call to SSA-NAME3, and the results will be displayed in the text

boxes on the right-hand pane. In the example below, a Session ID of 33554432 has been allocated, and a Response Code of "0" indicating a successful call is displayed.



The information displayed in the Messages box contains the version and signature of the core SSA-NAME3 routine and Population file.

Note: Issuing an Open call is not required to use the other functions; however it is recommended that an Open call is done in your application program.

ssan3_get_keys

This section provides information on **ssan3_get_keys**.

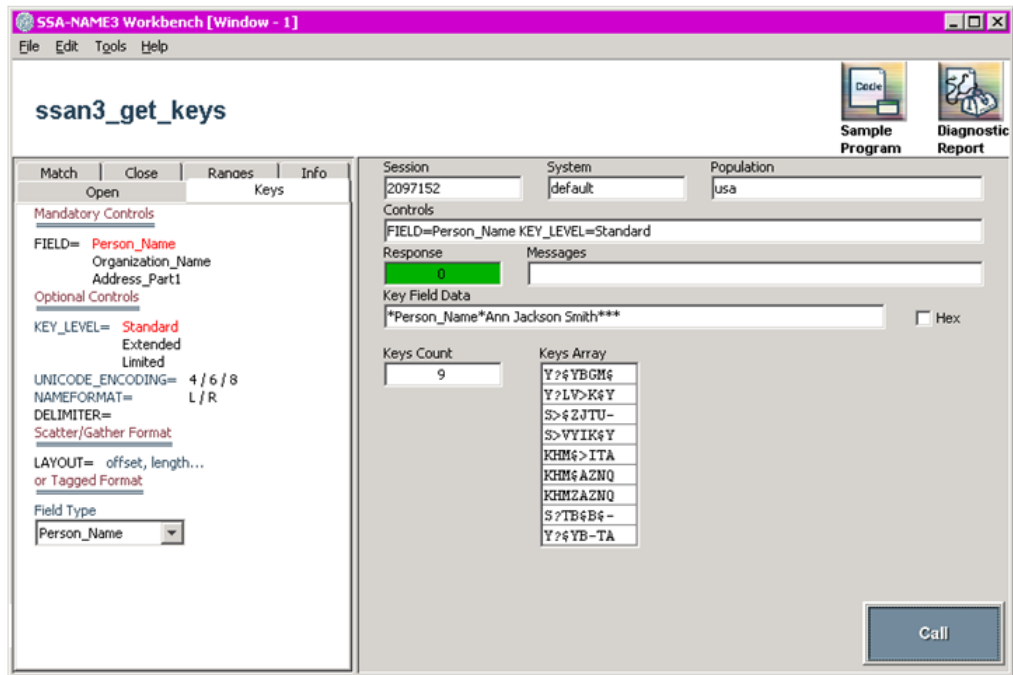
1. Select the **Keys** tab. A screen as shown below appears.

In a run-time environment, the **ssan3_get_keys** API Function is used to get the SSA-NAME3 Keys into the Keys Array, which the application program will store in a database index.

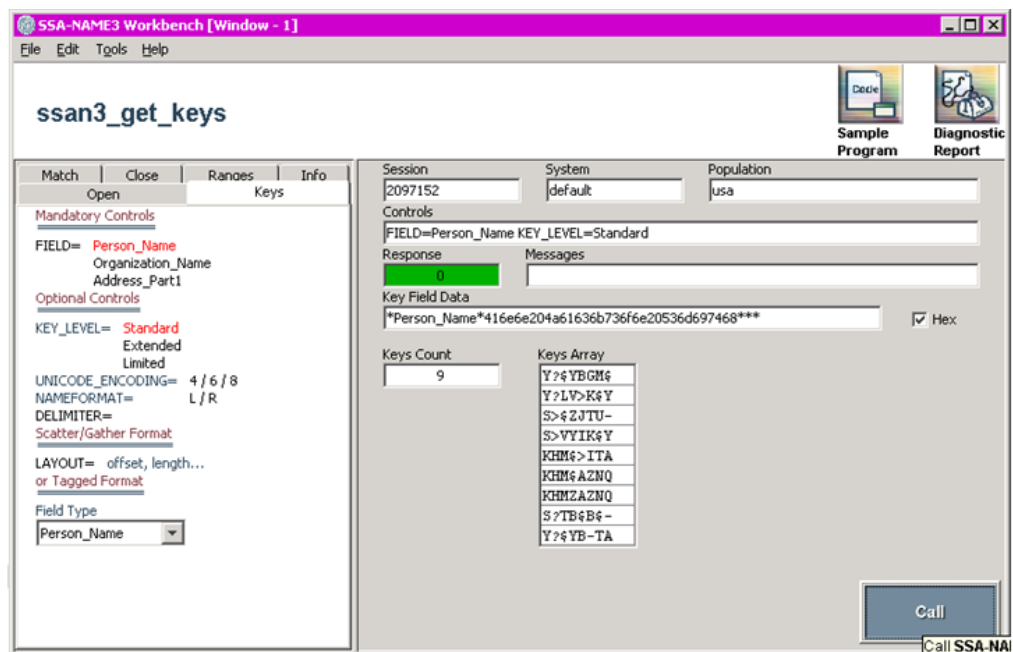
The screenshot shows the SSA-NAME3 Workbench [Window - 1] interface. The title bar is pink. The menu bar includes File, Edit, Tools, and Help. The main window is titled "ssan3_get_keys". On the left, there are tabs: Match, Close, Ranges, and Info. The "Keys" tab is selected. Below the tabs, there are sections for "Mandatory Controls" and "Optional Controls". Under "Mandatory Controls", the text "FIELD= Person_Name" is visible. Under "Optional Controls", the text "KEY_LEVEL= Standard" is visible. There are also fields for "UNICODE_ENCODING= 4 / 6 / 8", "NAMEFORMAT= L / R", and "DELIMITER= Scatter/Gather Format". A "Field Type" dropdown menu is set to "End of data". On the right side, there are input fields for "Session" (2097152), "System" (default), and "Population" (usa). Below these are "Controls" and "Response" fields. A "Key Field Data" text box is present. At the bottom right, there are "Keys Count" and "Keys Array" boxes. A "Call" button is located at the bottom right of the window.

As an example of using this function, the following steps demonstrate how to generate "Standard" Keys for the person name "Ann Jackson Smith", using the Tagged method of passing data.

2. Under the **Mandatory Controls** heading, click **Person_Name**. This adds the Field=Person_Name parameter to the Controls textbox. This will instruct SSA-NAME3 to use the **Person_Name** Algorithm for building keys on the data provided in the Key Field Data textbox.
3. Under the **Optional Controls** heading, click **Standard**. This adds the Key_Level=Standard parameter to the Controls textbox. The text in the control box should now look like this: FIELD=Person_Name
KEY_LEVEL=Standard
4. Select **Person_Name** from the Field Type dropdown box. This will add the text ***Person_Name*** to the Key Field Data text box.
Immediately after the last asterisk in the Key Field Data box, type Ann Jackson Smith.
5. Select **End of Data** from the Field Type dropdown, or type three asterisks (***) after the name just entered.
6. Click the **Call** button. The results will appear in the **Keys Count** and **Keys Array** boxes below the controls, as illustrated below:



7. If you select the **Hex** checkbox, the following screen appears with the hexadecimal equivalent of the string:



ssan3_get_ranges

This section provides information on **ssan3_get_ranges**.

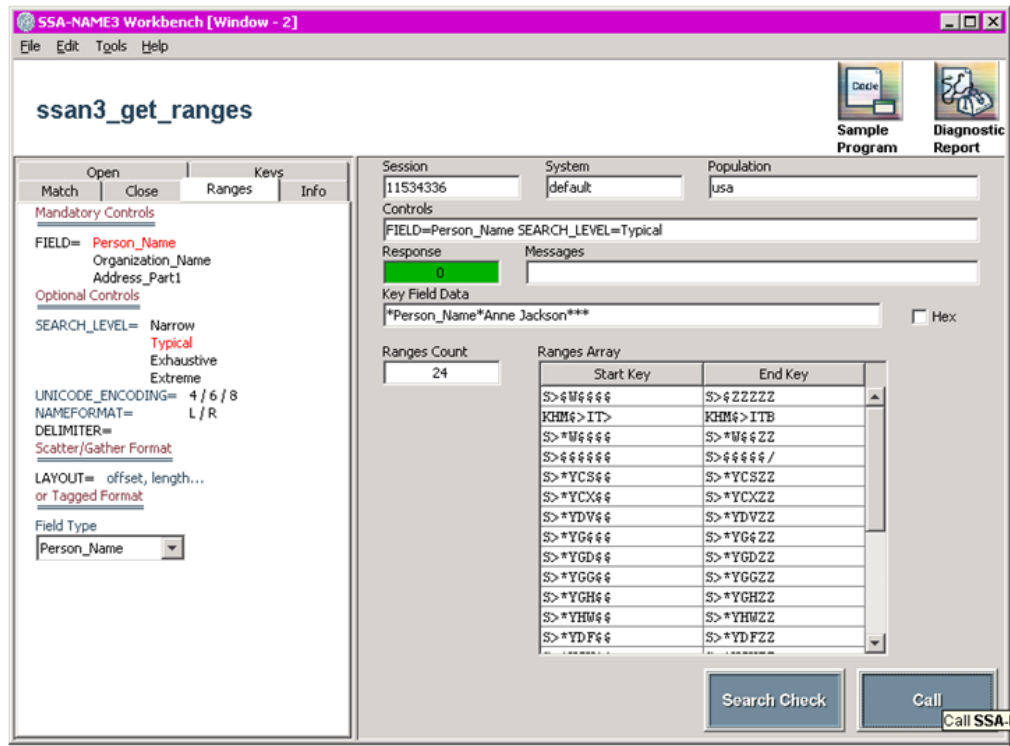
1. Select the **Ranges** tab. A screen as shown below appears.

In a run-time environment, the **ssan3_get_ranges** API Function is used to get the SSA-NAME3 Key Ranges into the Ranges Array, which the application program would use in a series of Select statements to retrieve records from the database.

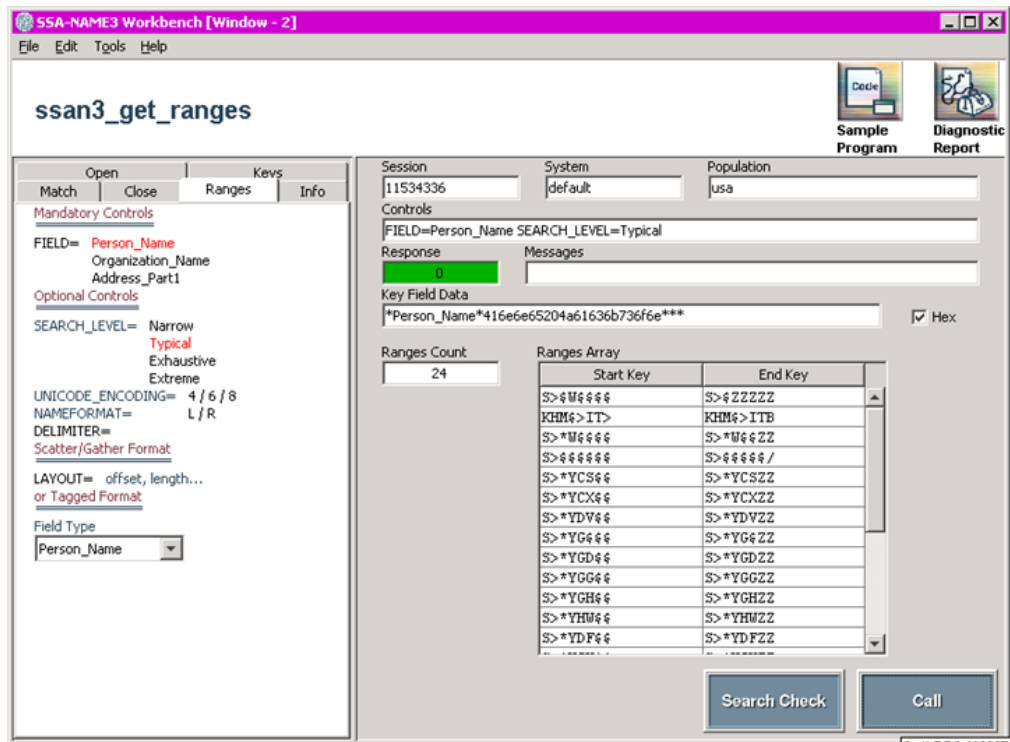
The screenshot shows the SSA-NAME3 Workbench [Window - 1] interface. The title bar is purple. The menu bar includes File, Edit, Tools, and Help. The main window is titled "ssan3_get_ranges". On the left, there are tabs: Open, Close, Keys, Ranges, and Info. The "Ranges" tab is selected. Below the tabs, there are sections for "Mandatory Controls" and "Optional Controls". Under "Mandatory Controls", the text is: FIELD= Person_Name, Organization_Name, Address_Part1. Under "Optional Controls", the text is: SEARCH_LEVEL= Narrow, Typical, Exhaustive, Extreme; UNICODE_ENCODING= 4 / 6 / 8; NAMEFORMAT= L / R; DELIMITER= Scatter/Gather Format; LAYOUT= offset, length... or Tagged Format; Field Type: End of data (dropdown). On the right, there are input fields for Session (2097152), System (default), and Population (usa). Below these are fields for Controls, Response, Messages, and Key Field Data. There are also buttons for Ranges Count, Ranges Array (Start Key, End Key), Search Check, and Call.

As an example of using this function, the following steps demonstrate how to generate **Typical** Search key ranges for the person name "Anne Jackson" using the Tagged method of passing data.

2. Under the **Mandatory Controls** heading, click **Person_Name**. This adds the Field=Person_Name parameter to the Controls textbox. This will instruct SSA-NAME3 to use the **Person_Name** Algorithm for building search key ranges on the data provided in the Key Field Data textbox.
3. Under the **Optional Controls** heading, click **Typical**. This adds the Search_Level=Typical parameter to the Controls textbox. The text in the **Controls** box should now look like this: FIELD=Person_Name
SEARCH_LEVEL=Typical
4. Select **Person_Name** from the Field Type dropdown box. This will add the text ***Person_Name*** to the Key Field Data text box.
5. Immediately after the last asterisk in the Key Field Data box, type Anne Jackson.
6. Select **End of Data** from the Field Type dropdown, or type three asterisks (***) after the name just entered.
7. Click the **Call** button. The results will appear in the **Ranges Count** and **Ranges Array** boxes below the controls as shown below:



8. If you select the **Hex** checkbox, the following screen appears with the hexadecimal equivalent of the string:



Search Check

The **Search Check** button checks the search key ranges for all available search levels against the keys generated in the **ssan3_get_keys** call. It makes sense to use this button only when trying to prove that a search name will or will not find a candidate file name. In other words, this simulates whether the name in the **ssan3_get_keys** call would be found using the name in the **ssan3_get_ranges** call, and if so, at what search level(s).

For this feature to produce results, the Keys and Ranges functions must have been executed in the current session.

1. Click the **Search Check** button after entering the examples above will display the results below. This proves that the name "Ann Jackson Smith" when using Standard Keys, would be found by the name "Anne Jackson" at all search levels.

SSA-NAME3 Workbench [Window - 2]

File Edit Tools Help

Search Check

Mandatory Controls

FIELD= Person_Name
Organization_Name
Address_Part1

Optional Key Controls

UNICODE_ENCODING= 4 / 6 / 8
NAMEFORMAT= L / R
DELIMITER=

Optional Ranges Controls

UNICODE_ENCODING= 4 / 6 / 8
NAMEFORMAT= L / R
DELIMITER=

Scatter/Gather Format

LAYOUT= offset, length...
or Tagged Format

Field Type
End of data

Session: 11534336
System: default
Population: usa

Key Controls

FIELD=Person_Name KEY_LEVEL=Standard
Key Field Data For File
*Person_Name*416e6e204a61636b736f6e20536d697468***

Ranges Controls

FIELD=Person_Name SEARCH_LEVEL=Typical
Key Field Data For Search
*Person_Name*416e6e65204a61636b736f6e***

Response: 0
Messages:

	Standard	Extended	Limited
Narrow	Search Record Found	Search Record Found	Search Record Found
Typical	Search Record Found	Search Record Found	Search Record Found
Exhaustive	Search Record Found	Search Record Found	Search Record Found
Extreme	Search Record Found	Search Record Found	Search Record Found

Back to Search Call

Perform search check

2. Click the **Back to Search** button to return to the normal Ranges screen.

ssan3_match

This section provides information on **ssan3_match**.

1. Select the **Match** tab, a screen as shown below is displayed:

The screenshot shows the SSA-NAME3 Workbench [Window - 1] interface. The title bar is purple. The menu bar includes File, Edit, Tools, and Help. The toolbar has icons for 'Sample Program' and 'Diagnostic Report'. The main workspace is titled 'ssan3_match'. It contains several sections: 'Open' with buttons Match, Close, Ranges, and Info; 'Mandatory Controls' with a list of purposes (Wide_Contact, Contact, Individual, Resident, Address, Organization, Division, Household, Person_Name, Fields, Corp_Entity, Family, Wide_Household) and a Filter1 dropdown; 'Optional Controls' with MATCH_LEVEL= (Typical, Conservative, Loose), Accept Limit (+/-nn), Reject Limit (+/-nn), ADJWEIGHT= (None), and Adjweight value (+/-nn); 'Session' (2097152), 'System' (default), and 'Population' (usa); 'Controls' (empty text box); 'Response' (empty text box); 'Messages' (empty text box); 'Search Data' (empty text box); 'File Data' (empty text box); 'Hex' (checkbox); 'Decision' (empty text box); 'Score' (empty text box); and buttons for 'Explain', 'Match Level Comparison', and 'Call'.

In a run-time environment, once a set of candidate records has been retrieved by the application program, the user's application calls the **ssan3_match** function to score and further qualify the candidate records.

As an example of using this function, the following steps demonstrate how to match the Search Data for an "Ann Jackson Smith" living at "555 Harriman Plaza", with the File Data for an "Anne Jackson" living at "55 Harrison Plaza", using the "Resident" Match Purpose, a "Typical" Match Level and the "Tagged" method of passing data.

2. Under the **Mandatory Control** heading, click **Resident** in the list of Purposes. This adds the Purpose=Resident parameter to the **Controls** textbox. This will instruct SSA-NAME3 to use the Resident Match Purpose when comparing the search and file records entered below.
3. Under the **Optional Controls** heading, click **Typical**. This adds the Match_Level=Typical parameter to the **Controls** textbox. The text in the **Controls** will be, PURPOSE=Resident MATCH_LEVEL=Typical.
4. Select **Person_Name** from the Field Type dropdown box. This will add the text *Person_Name* to the Search Data text box.
5. Type the name Ann Jackson Smith immediately following the last asterisk.
6. Select **Address_Part1** from the Field Type dropdown box. This adds the text *Address_Part1* directly after the name just typed in the Search Data box.
7. Type the street address 555 Harriman Plaza immediately following the last asterisk.
8. Select **End of Data** from the Field Type dropdown, or type three asterisks (***) after the address just entered.
9. Click **Tab** over to the File Data box.

10. Follow steps 3 through 7 above to create a file record with the Name Anne Jackson and the street address 55 Harrison Plaza.
11. Click the **Call** button. The results will appear in the **Decision** and **Score** boxes under the File Data as illustrated below:

The screenshot shows the SSA-NAME3 Workbench [Window - 2] interface. The main window is titled 'ssan3_match'. It features a menu bar (File, Edit, Tools, Help) and a toolbar with 'Sample Program' and 'Diagnostic Report' icons. The interface is divided into several sections:

- Left Sidebar:** Contains 'Open' and 'Keys' tabs. The 'Open' tab is active, showing a list of keys (Corp_Entity, Family, Wide_Household, Filter1) and a 'Filter1' dropdown. Below this are logical operators (AND, NOT, OR) and a section for 'Optional Controls' with fields for MATCH_LEVEL (Typical, Conservative, Loose), Accept Limit (+/-nn), Reject Limit (+/-nn), ADJWEIGHT= (None), and Adjweight value (+/-nn). There are also fields for UNICODE_ENCODING= (4 / 6 / 8), NAMEFORMAT= (L / R), DELIMITER=, Scatter/Gather Format, SEARCH=, FILE=, or Tagged Format, and a Field Type dropdown (Address_Part1).
- Main Configuration Area:** Contains fields for Session (11534336), System (default), and Population (usa). Below these are 'Controls' (PURPOSE=Resident, MATCH_LEVEL=Typical), 'Response' (0), and 'Messages'.
- Search Data:** A text field containing the search query: *Person_Name*Ann Jackson Smith*Address_Part1*555 Harriman Plaza***.
- File Data:** A text field containing the file data: *Person_Name*Anne Jackson*Address_Part1*555 Harrison Plaza***.
- Bottom Right:** Contains a 'Hex' checkbox, a 'Decision' box (A), a 'Score' box (090), and three buttons: 'Explain', 'Match Level Comparison', and 'Call'.

The score will be a value between 0 and 100. The Match Decision is based on the pre-set score thresholds for this Purpose and Match Level. A Decision of "R" means the records would be Rejected, "U" means "Undecided" and "A" means Accepted.

12. If you select the **Hex** checkbox, the following screen appears with the hexadecimal equivalent of the string:

The screenshot shows the SSA-NAME3 Workbench [Window - 1] interface. The main window is titled "ssan3_match". It has a menu bar with "File", "Edit", "Tools", and "Help". There are two icons in the top right: "Sample Program" and "Diagnostic Report".

The interface is divided into several sections:

- Mandatory Controls:** A list of controls including "PURPOSE=" with options "Wide_Contact", "Contact", "Individual", "Resident" (highlighted in red), "Address", "Organization", "Division", "Household", "Person_Name", "Fields", "Corp_Entity", "Family", "Wide_Household", and a "Filter1" dropdown.
- Optional Controls:** A list of controls including "MATCH_LEVEL=" with options "Typical" (highlighted in red), "Conservative", and "Loose". It also includes "Accept Limit (+/-nn)", "Reject Limit (+/-nn)", "ADJWEIGHT=" with a dropdown set to "(None)", and "Artificial value (+/-nn)".
- Session:** A text field containing "2097152".
- System:** A text field containing "default".
- Population:** A text field containing "usa".
- Controls:** A text field containing "PURPOSE=Resident MATCH_LEVEL=Typical".
- Response:** A text field containing "0".
- Messages:** A text field.
- Search Data:** A text field containing "*Person_Name*416e6e204a61636b736f6e20536d697468*Address_Part1*353535204861727269".
- File Data:** A text field containing "*Person_Name*416e6e65204a61636b736f6e*Address_Part1*353535204861727269736f6e2050".
- Hex:** A checkbox that is checked.
- Decision:** A text field containing "A".
- Score:** A text field containing "390".

At the bottom right, there are three buttons: "Explain", "Match Level Comparison", and "Call".

Match Level Comparison

The **Match Level Comparison** button causes the Match call to be invoked for the same search and file data, for each of the available match levels. This shows a comparison of the Decisions and Scores for the different Match Levels.

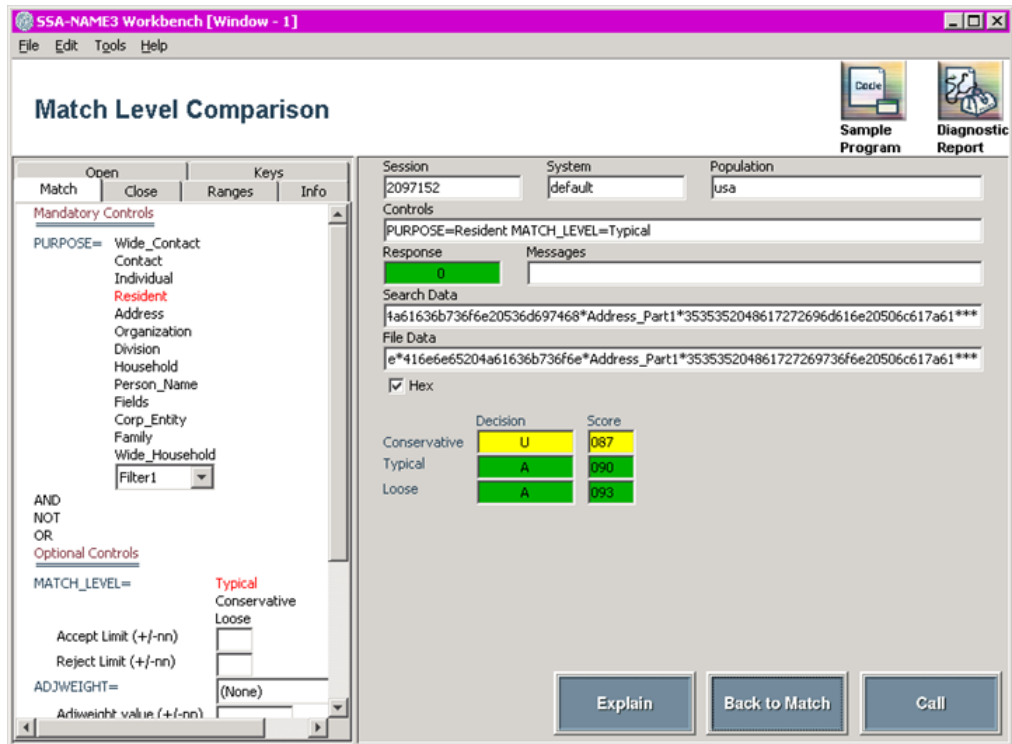
1. Click the **Match Level Comparison** button after entering the search and file data above will display the results below:

The screenshot shows the 'Match Level Comparison' window in the SSA-NAME3 Workbench. The window has a menu bar (File, Edit, Tools, Help) and a toolbar with 'Sample Program' and 'Diagnostic Report' buttons. The main area is divided into two panes. The left pane, titled 'Match', contains 'Mandatory Controls' (PURPOSE= Wide_Contact, Contact, Individual, Resident, Address, Organization, Division, Household, Person_Name, Fields, Corp_Entity, Family, Wide_Household, Filter1) and 'Optional Controls' (MATCH_LEVEL= Typical, Conservative, Loose; Accept Limit (+/-nn); Reject Limit (+/-nn); ADJWEIGHT= (None); Adjust weight value (+/-nn)). The right pane contains 'Session' (2097152), 'System' (default), and 'Population' (usa). It also has 'Controls' (PURPOSE=Resident MATCH_LEVEL=Typical), 'Response' (0), 'Messages', 'Search Data' (*Person_Name*Ann Jackson Smith*Address_Part1*555 Harriman Plaza***), and 'File Data' (*Person_Name*Anne Jackson*Address_Part1*555 Harrison Plaza***). A table shows match results for Conservative, Typical, and Loose levels. At the bottom are 'Explain', 'Back to Match', and 'Call' buttons.

	Decision	Score
Conservative	U	087
Typical	A	090
Loose	A	093

Note: You can refine the Accept and Reject score limits by entering + or - values in the Accept Limit and/or the Reject Limit text boxes (in the Optional Controls section of the left handpane). For more information, see the Controls section in the *API REFERENCE guide*.

2. If you select the **Hex** checkbox, the following screen appears with the hexadecimal equivalent of the string:



- Click the **Back to Match** button to return to the normal Match screen.

Combining Purposes

Match Purposes can be combined using the operators AND, OR and NOT. Match Filters can also be used in combination with Match Purposes. For information on how and why to use filters and combine purposes, refer to the Advanced Controls section in the *API REFERENCE GUIDE*.

The point and click functionality of the Workbench environment currently only supports simple combination of purposes (one operator with no match level overrides). To set up more complex multi-purpose controls, the details must be manually entered into the Controls text box.

For example, to set up the Controls for the following simple multi-purpose definition using point and click items in the left-hand-pane:

```
PURPOSE=(Individual OR Resident)
```

- Click **Individual** in the left-hand pane, then click the operator **OR**, then click **Resident**. The following screenshot shows the construction of the Controls:

SSA-NAME3 Workbench [Window - 1]

File Edit Tools Help

ssan3_match

Sample Program Diagnostic Report

Open Keys
Match Close Ranges Info

Mandatory Controls

PURPOSE= Wide_Contact
Contact
Individual
Resident
Address
Organization
Division
Household
Person_Name
Fields
Corp_Entity
Family
Wide_Household
Filter1

AND
NOT
OR

Optional Controls

MATCH_LEVEL= Typical
Conservative
Loose

Accept Limit (+/-nn)

Reject Limit (+/-nn)

ADJWEIGHT= (None)

Adjweight value (+/-nn)

UNICODE_ENCODING= 4 / 6 / 8

NAMEFORMAT= L / R

DELIMITER=

Scatter/Gather Format

SEARCH=

FILE=

or Tagged Format

Field Type
End of data

Session 33554432 System default Population usa

Controls
PURPOSE=(Individual OR Resident)

Response Messages

Search Data

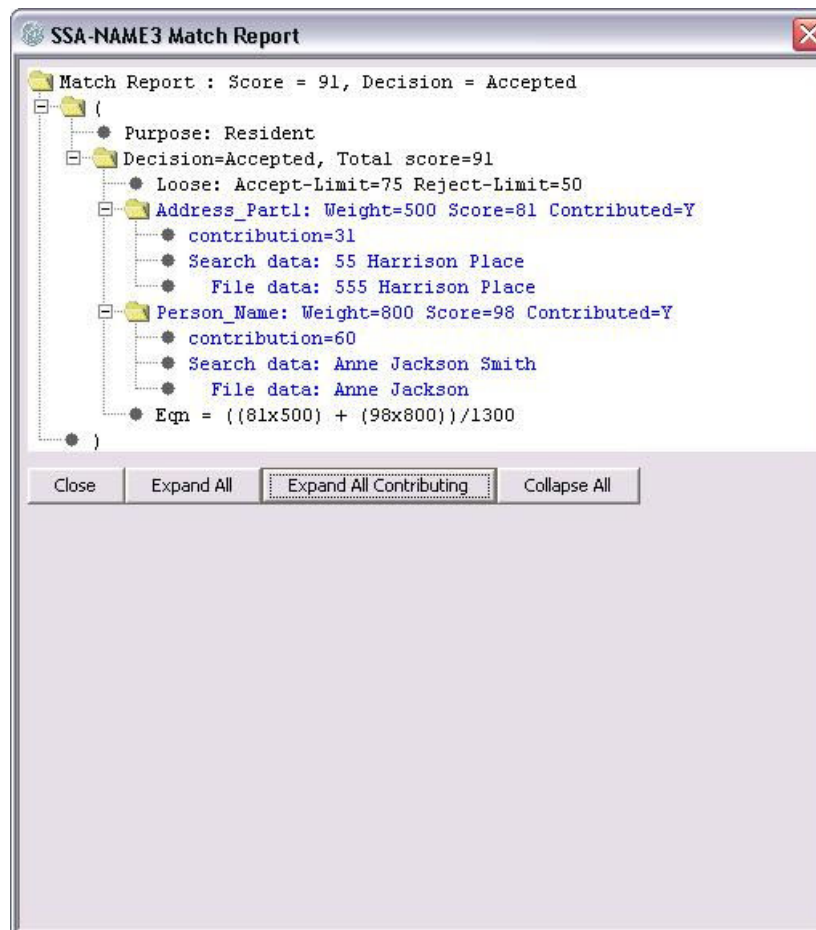
File Data

Decision Score

Explain Match Level Comparison Call

Match Explain

The internal logic of the match process can be viewed using the **Explain** button. This will open a dialog which presents the logic of the last match call performed in the form of a tree.



The score returned by match is the sum of the scores of the individual fields. As can be seen in the example above, 2 fields participate in the match process, **Address_Part1** and **Person_Name**. **Address_Part1** contributed 31 and **Person_Name** contributed 60, giving a total of 91. Note that, in some cases, the total of the individual field scores may not equal the returned score due to rounding.

ssan3_info

This section provides information on **ssan3_info**.

1. Select the **Info** tab. A screen as shown below appears:

SSA-NAME3 Workbench [Window - 1]

File Edit Tools Help

ssan3_info

Sample Program Diagnostic Report

Open Keys
Match Close Ranges Info

Mandatory Controls

ITEM= system
population
purpose
field
key_level
search_level
match_level
populations
efields
systems
severity

Session 33554432 System default Population usa

Controls

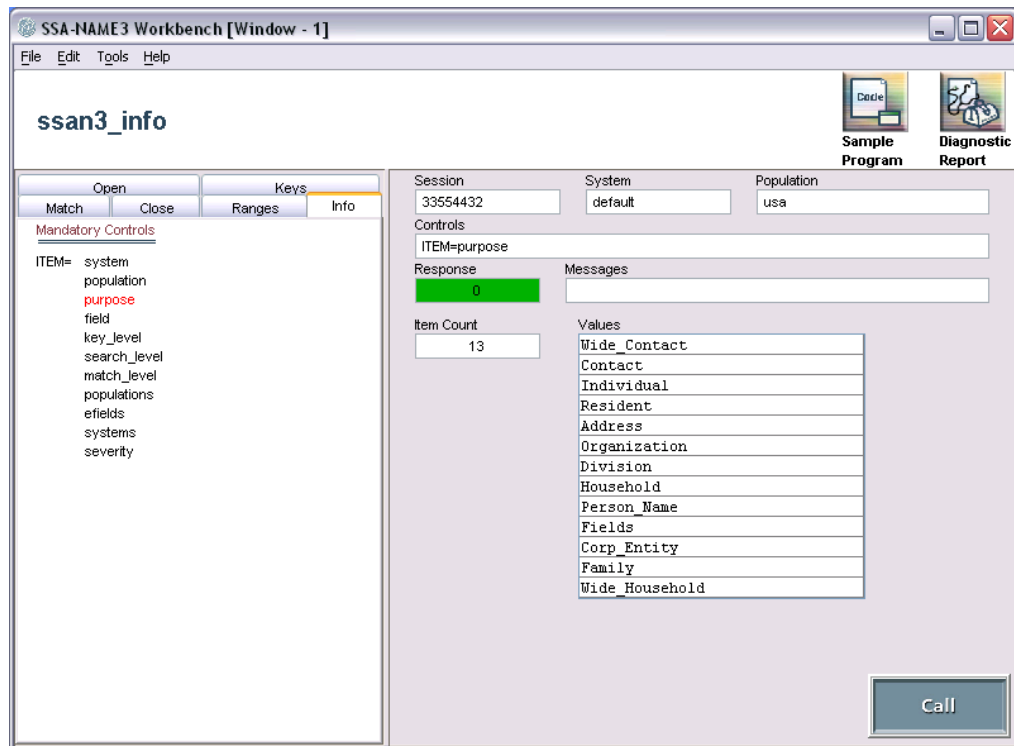
Response Messages

Item Count Values

Call

The Info screen allows you to interrogate SSA-NAME3 at an individual item level to discover what Systems and Populations are available and, for the current Population, what Fields, Purposes, Key Levels, Search Levels, Match Levels and Efields are available.

2. To display the Match Purposes available to the USA population, select the **purpose** item and click **Call**. The following screen is displayed:



This information can also be summarized.

3. To summarize the information, select **Help > System Documentation** or **Help > Population Documentation** menu options.

Other Menu Options

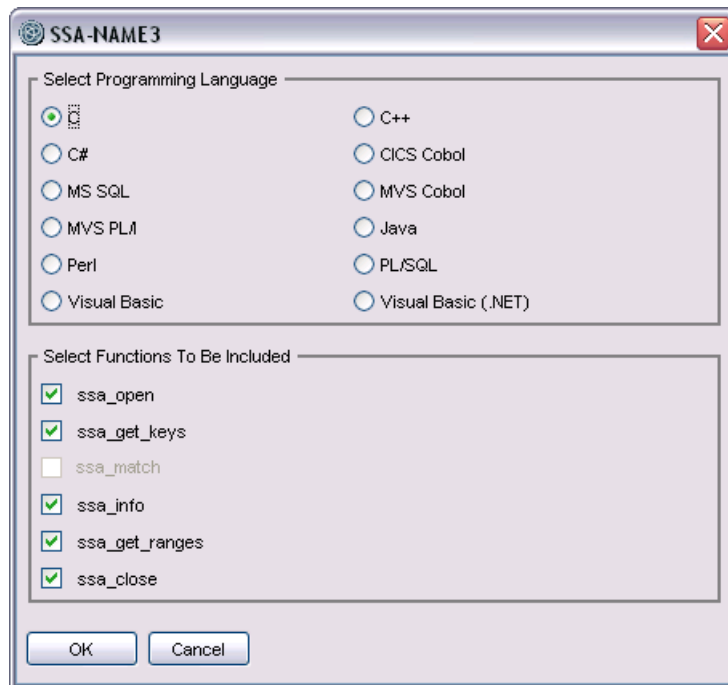
This section provides information on the other menu options.

Sample Program

The Workbench can generate program source code with example calls to the SSA-NAME3 API in various programming languages.

To use this functionality, first make sure that you have called all of the SSA-NAME3 API functions that you wish to include, in your current Workbench session.

1. Click the **Sample Program** icon at the top of the screen.
The Select Programming Language will be displayed.
2. Select the programming language to be generated.
The API Functions that have been called in the current session will be automatically selected. The **ssan3_open** and **ssan3_close** will be auto-selected as they do not require additional control parameters.



3. Unselect any API functions that is not required and click **OK**. In this example, a C program was requested.
4. Click **OK**, a sample program in C will be displayed as shown below.

```

/* Program generated by Informatica.
*
* The SSA-NAME3 development environment must be established before compiling
* and linking this sample. Refer to the SSA-NAME3 documentation for details.
*
* Microsoft Windows
* =====
* To generate an executable use the command below
*   cl -Fo<FILENAME>.obj -I%SSATOP%\h -c <FILENAME>.c
*   cl -Fe<FILENAME>.exe <FILENAME>.obj -link %SSATOP%\lib\stssan3cl.lib
* SSATOP usually refers to the top level of the SSA-NAME3
* installation, typically 'C:\ids\nm3'
*
* Unix systems
* =====
* To generate an executable use the commands below
* $SSACCCMD $SSACCFLLGS -c -o <FILENAME>.o <FILENAME>.c
* $SSALINKCMD <FILENAME> <FILENAME>.o -L$SSATOP/bin -lssan3cl $SSALLIBS
* OS/390 Unix System Services
* $SSACCCMD $SSACCFLLGS -c -o <FILENAME>.o <FILENAME>.c
* $SSALINKCMD sample sample.o $SSALIB/libssan3cl.x
*/

#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include "ssan3cl.h"

#define rangeof(arr)    (sizeof(arr)/sizeof((arr)[0]))

static long
test_ssa_open (
    long          sockh,
    long          *session_id,
    char          *sysName,
    char          *population,
    char          *controls)
{
    long          rc;
    char          rsp_code[SSA_SI_RSP_SZ];
    char          ssa_msg[SSA_SI_SSA_MSG_SZ];

    printf ("----- ssan3_open -----\\n");
    printf ("Session Id      : %ld\\n", *session_id);
    printf ("System           : %s\\n", sysName);
    printf ("Population        : %s\\n", population);
    printf ("Controls          : %s\\n", controls);

    rc = ssan3_open (sockh,
                    session_id,
                    sysName,
                    population,
                    controls,
                    rsp_code);
}

```

Use the drop-down list to access examples for other languages such as Java, C++, Cobol, Visual Basic, PL/SQL etc.

Note: These sample programs are intended to be working examples of the call interface only. They do not include any database I/O functionality (or screen dialogue) as will be required in an actual key building or search and match program.

5. To copy and paste the code into your application code, use the **Edit** menu option.

6. To save the sample code as a starting point for your actual application, use the **File** menu option.
If you require help in designing a searching and matching application using SSA-NAME3, see the *API REFERENCE* guide (this contains a description of the various API calls, parameters and a high level program flow guide). Alternatively, contact your Informatica Corporation support office. Our Tech Support team will be happy to help in explaining the details and conceptual use of our products. (Ensure to check our Online Support Library for more enhanced code examples as they become available).

Diagnostic Report

At times, individual results from SSA-NAME3 calls via the Workbench or from your application may need to be explained or reported to Informatica Corporation Technical Support. In those cases, we recommend that you copy the relevant input data to the Workbench, and call SSA-NAME3 to duplicate the problem. Once you have done so, you can use the **Diagnostic Report** button to generate a report that contains the input and the results from the SSA-NAME3 call.

When you click the **Diagnostic Report** button you will be prompted to enter a description of the problem and a filename where the report can be stored. The Workbench will then create a file with your contact details and the input/output from calls to SSA-NAME3. You can then send this file to Informatica Corporation for further investigation.

Note: You can record multiple such cases to the same report file.

Using Batch Input/Output with Workbench

The SSA-NAME3 call parameters from a session can also be stored in a format that can be later run back through the Workbench in batch mode. This batch facility can also be used to run the Workbench in batch mode with fresh input derived from an input file.

You need to discuss your reasons for wanting to use the batch input/output features below with Informatica Corporation technical support, as using these features will require modifying the Workbench's program shortcut (in Windows) or the startup script (for Unix).

Firstly you will need to create a batch input file that can be used to drive the Workbench in batch mode.

Recording Input from a Workbench Session

This section provides information on how to record from a Workbench session.

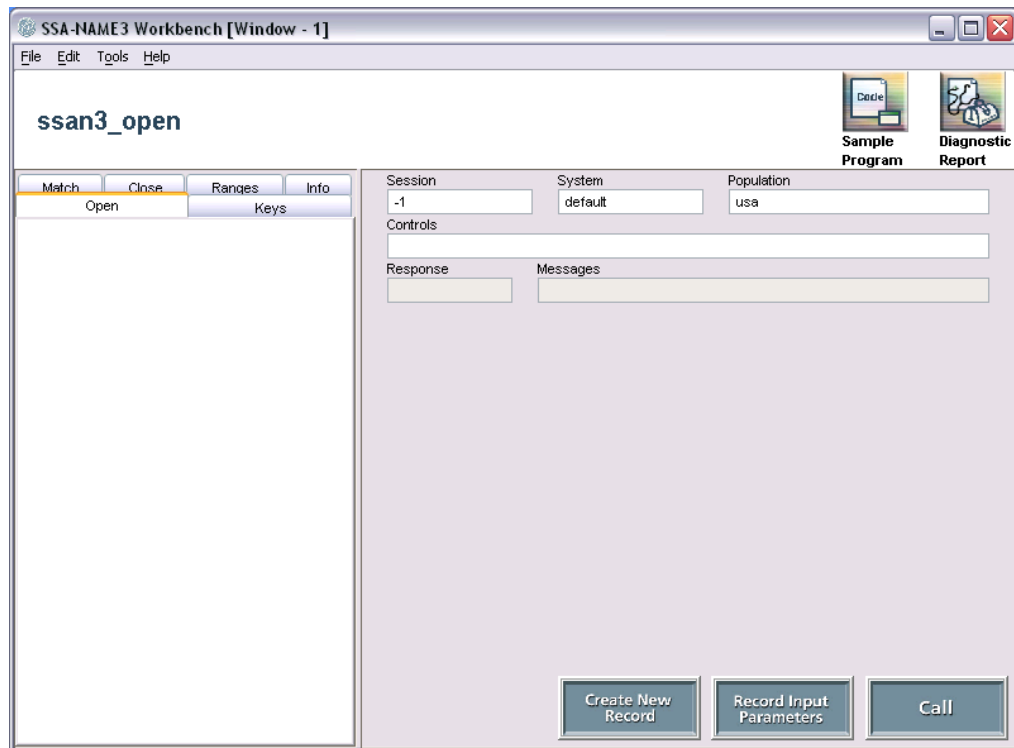
1. Modify the Workbench's shortcut properties (in Windows - use the **Start** menu to access the Workbench shortcut, and right-click to obtain the shortcut Properties. Changing the command line (e.g. `C:\InformaticaIR\bin\wrkbench.bat`) by adding the `-cFileName` parameter will set the shortcut up to start the WB client in record mode. For example, specifying:

```
C:\InformaticaIR\bin\wrkbench.bat -cc:\temp\test.txt
```

This will start the Workbench in record mode and allow you to record all your calls in the file called `test.txt` in the `c:\temp` directory.

Note: If you are planning to use the Batch mode frequently, it is convenient to create separate shortcuts or scripts for each mode.

After entering the Workbench, the following screen will be displayed:



2. To start recording, click the **Create New Record** button, then input your call criteria, perform the appropriate call to SSA-NAME3.
3. Click the **Record Input Parameters** button.

Repeat as many times as there are input records. Once you have recorded enough, completely closing the Workbench which will write and close the batch file.

An example of the saved file containing two input records is shown below:

```

RECORD NUMBER= 1
*=====
ssan3_get_keys
*=====
SYSTEM= default
POPULATION= usa
CONTROLS= FIELD=Person_Name KEY_LEVEL=Standard
KEY-FIELD-DATA= *Person_Name*Ann Jackson Smith***
*
ssan3_get_ranges
*=====
SYSTEM= default
POPULATION= usa
CONTROLS= FIELD=Person_Name SEARCH_LEVEL=Typical
KEY-FIELD-DATA= *Person_Name*Anne Jackson***
*

```

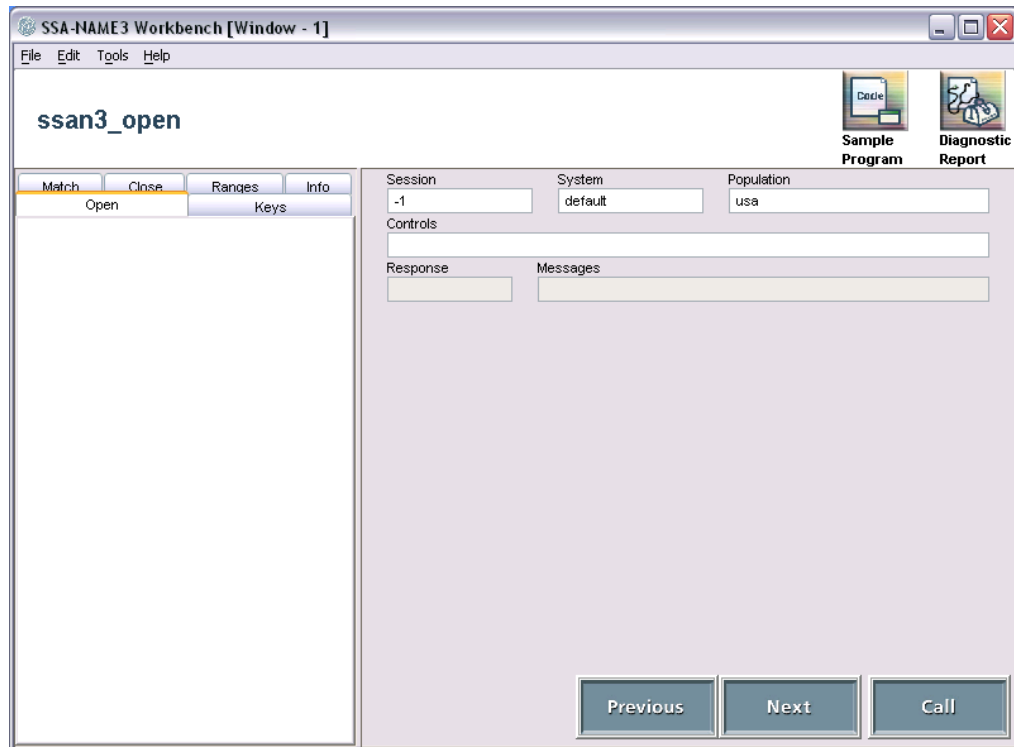
Creating Input from Scratch

If you would like to manually write your own batch input file, instead of using the Workbench to create the file, follow the syntax above (or create a few sample records using the Workbench) and then clone them to create your own input file.

Running the Workbench in Batch Input Mode

This section provides information on how run the Workbench in batch mode.

1. To start the Workbench so that it can read from batch input files, modify the shortcut or script to add '-b' parameter.
`C:\WINDOWS\COMMAND.COM /E:3000 /C C:\InformaticaIR\bin\wrkbench.bat -b`
2. Start the Workbench and open the file that contains the input records and parameters using the **File > Open Batch File** menu option.
3. Select the file containing the input records.



4. To navigate between the records, click the **Next** and **Previous** buttons on the Workbench screen.
5. To close the file, choose **File > Close Batch File**.

Screen Capture

The Workbench has the ability to save screen-shots (as JPEG images) on some platforms. This feature may be unavailable in the future, since it relies on a deprecated feature of Java.

To enable screen capturing, invoke the Workbench with the -r parameter as follows:

```
C:\WINDOWS\COMMAND.COM /E:3000 /C C:\InformaticaIR\bin\wrkbench.bat -r<dir>
```

where

<dir>

is the name of an existing directory to store the images. Once started with this parameter, the **File** menu will contain options to start and stop screen capturing. The images are stored in the nominated directory using generated file names.

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