

**Universal Language Tutor and Translator
+ LifeStyle Information Library**



SORO - NIGERIA



**The highly accurate Universal Language Tutor and Translator
for Yoruba, Igbo and Hausa Nigerian Languages
+ Lifestyle Information Library**

Volume 1/Version 2.5 *User Manual*

Using SORO - Nigeria
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Chapter 1

Preface

SORO is the “Universal Language Tutor and Translator Plus LifeStyle Information Library”. This software is used to preserve legacy data for the next generation.

It was observed that due to migration of people round the world; it has become common occurrences to have inter-racial marriages, also business relationships and friendships with other races are very common. Learning to speak other languages help to develop better relationships and preserve cultural legacies.

SORO was developed to help preserve languages in their original formats and also promote the correct pronunciations of words within such languages. Nigeria has over 500 languages with three main languages been Yoruba, Igbo and Hausa. There has been many business alliances formed between people speaking these languages and also inter-marriages between Nigerian and other nationals is becoming more common, these have made it imperative to develop this software.

SORO may help to enhance business and personal relationships by reducing communications barriers between partners.

Features of SORO

This software has many features that will help user to understand the three main Nigerian languages; it will also help to preserve lifestyle information for next generation by storing such information as data, audio and images.

The application has been developed to provide a unique method of teaching any language and to achieve the most accurate translation to other languages providing that appropriate database exists.

Main features of SORO are:

Allows structured language teaching program to be set up and delivered to the user in pre-arranged order e.g. Language teaching program can be set up in lessons (or Categories) and the user selects the appropriate lessons and records their progress.

Ability for Language training program to include audio files programmed with each unit of a lesson. Whenever the user selects any unit of a lesson the appropriate audio files can be played and recorded (if required), played back or simply overwritten. Practice audio files can be appended to existing audio files to simulate the original pronunciation of words/phrases.

Key features of the application include:

1. Allow words/phrases including their audio or multimedia illustrations to be added (or edited) to the database in Unicode format i.e. accented characters and other standard characters.
2. Allows searches to be performed for accented characters (data) by using non-accented characters. This is applicable to source or translated data.
3. Allows words/phrases to be categorised into how they can be used for communication e.g. words like “airplane”, “airport”, “ocean liner” may be categorized into “Travel”. When category of “Travel” is selected then words/phrases listed above can be searched for and displayed to the user. Words/phrases may belong to multiple categories.
4. Data searches carried out using “Categories” can be displayed in order of the number assigned in the “Cat_order” data field. This way the system can be used to compile language tutoring by lessons and the information displayed to the students in the order of numeric value assigned to the Cat_order field.
5. Allows the translated data to be matched against exact meaning of the original source language e.g. “run” has 76 meanings, this application allows the user to indicate which of these 76 meanings the translation actually matches. Thus allowing a very accurate translation to occur.
6. Words/phrases audio files can be saved against the words/phrases and then played back and re-recorded. The audio files can be for example how the words/phrases are pronounced and/or with samples of how to dialogue or create conversation with the words/phrases.
7. Performs accurate translation from one language e.g. A to B. The translation process uses a unique algorithm, which inserts intelligently the words/phrases that matches the source data. This then translates any words/phrases found in a sentence (source data) from one language to another.
8. Performs accurate reverse translation from language B to A for example using same method as explained above.
9. SORO allows selection of multiple reverse translation result to be selected by user e.g. he, she or it may mean “ya” in another language. In reverse translation the user will be prompted to select the appropriate translation i.e. select if he or she or it is the most appropriate in context of translation.
10. Application allows visual search for all English (main language) data. The entire main language (words/phrases) can be scrolled and searched visually.
11. The system alerts the user when more than one English words/phrases are translated to mean same word/phrases in another language. e.g. hello and “how are you” may mean “bawoni” in Yoruba Language. The system will inform the user when the translation for either of the words hello or “how are you” is being entered or ask for a choice if interactive mode has been selected during language translation.
12. The application also allows for indication of multiple description/meaning of words/phrases.

-
13. Keyboard punctuations have no effect on the accuracy of the translated language data.
 14. The system can translate any of the four or more programmed languages A, B, C, D and E from one language to another e.g. Language B to C or E to B.
 15. This software application has all the tools that enable it as a language tutoring tool by using category function which makes it possible to present each teaching lesson in synchronized order to the user.
 16. The incorporation of audio, visual, unique language translation technique and accurate language writing aid with Unicode character has made this application to be an excellent language tutoring tool.
 17. Lifestyle Information can also be stored in the application. This may include family tree information with pictures, audio data recorded from grandparents etc. Information such as Nigerian food recipes, Children school activities, family and special event photographs can be stored in categories for easy searching and display. Each data recorded as Lifestyle information can be stored with up to four versions V1 to V4 per data..
 18. Quiz Function that allows the user to test their knowledge of the translated words/phrases.

NOTE: This software does not translate every English word/phrases to Yoruba, Igbo and Hausa data, it relies on the available data in the system to perform the translation, currently the system has over 1000 translated words and phrases for each language (Yoruba, Hausa and Igbo).

Periodic update may be made available in future by TalkaSoft to populate the database and enhance accuracy of translations or the user may simply add additional data including their translation to populate their database.

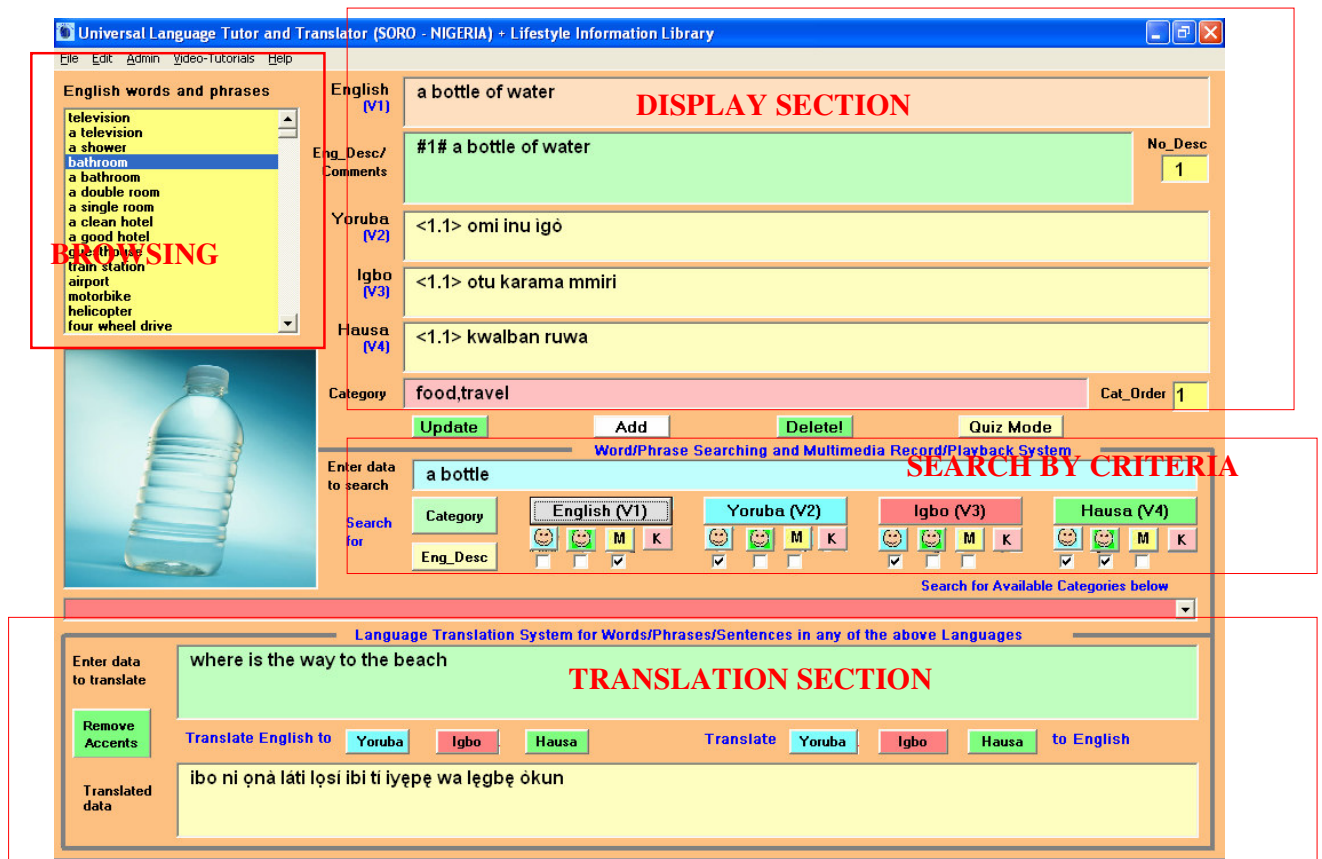
Chapter 2 Getting Started

This chapter explains how to start the application and navigate to the main features.

Navigating the menu start-up

Select “**Start > Program Files > TalkaSoft > SORO > SORO**” to start the application.

The application screen shown below will be displayed:



The screen is divided into four screen sections as shown above:

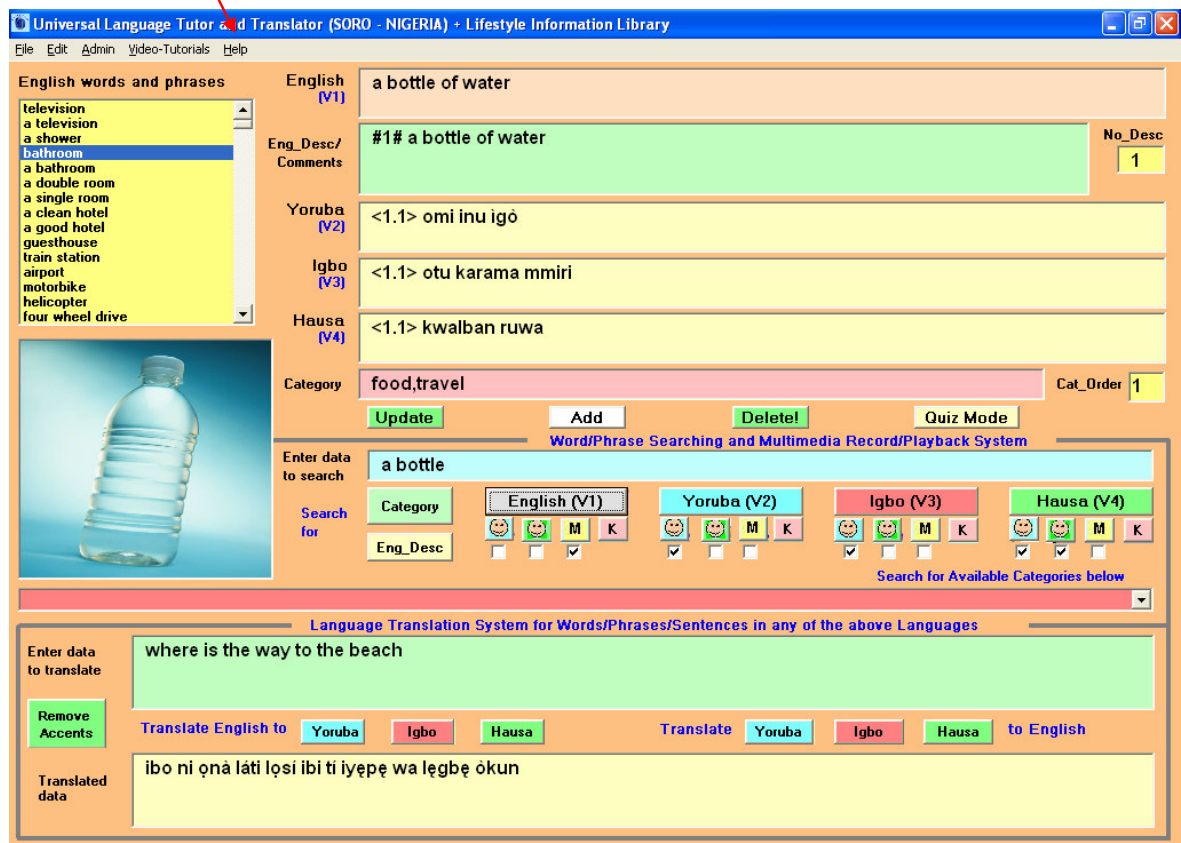
- **Display:**
Display English and the translated languages of Hausa, Igbo and Yoruba.
- **Browsing:**
Data can be searched by scrolling through the existing data list or by typing the first character of data being searched for and then selecting the appropriate data for translation. When selected, the details of the selected data are displayed in the display section.
- **Search by Criteria:**
Data can be searched for by using search criteria such as “come%” which searches for data that starts with “come”. The found data are displayed in the display section. Option to find remaining data is performed in a secondary form displayed immediately the searching was initiated.
- **Translation sections:**
This section can be used independent of the display and searching sections. Sentences can be translated to any of Yoruba, Igbo and Hausa. The translated data is then displayed on the translation section as illustrated above. Reverse data translation can also be performed from these languages to English.
- **Quiz Module:**
This allows teachers and users to test their understanding of how to write any of the languages. The users can try to write the translation of the displayed English Words/phrases as much as possible with the use of proper accented keyboard to aid the accurate writing of the language of interest.

Chapter 3 Using the help information

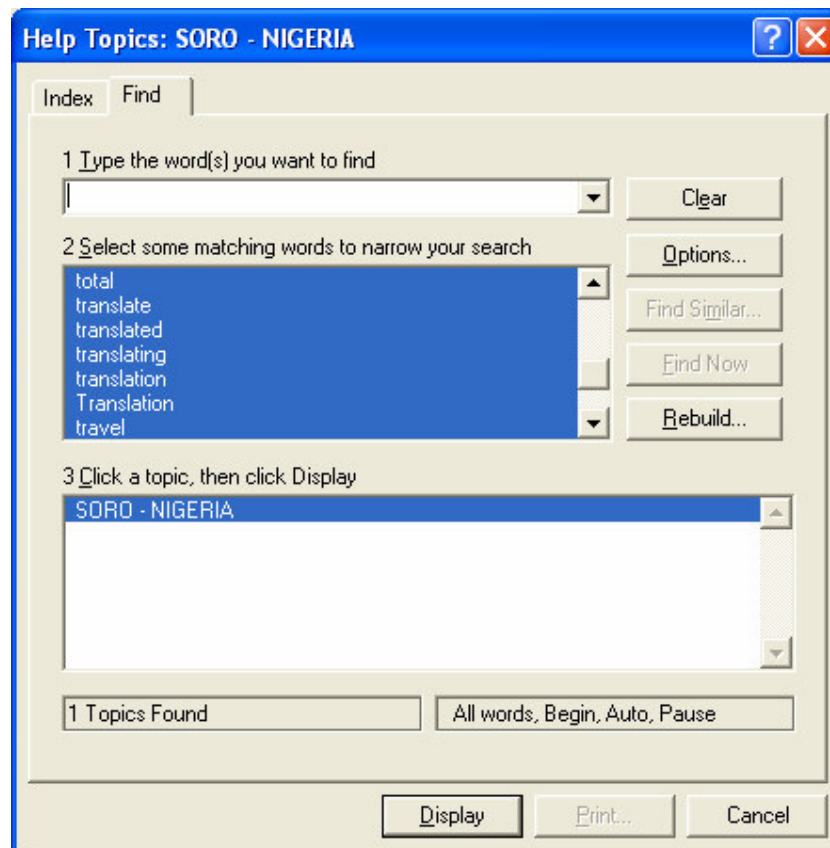
Getting help in the software is very simple; there are many ways to get help while using the application as stated below:

Press F1 key from anywhere to display appropriate help file, then search for any functions you want information on in the help file or use the User Manual if not available in the help file.

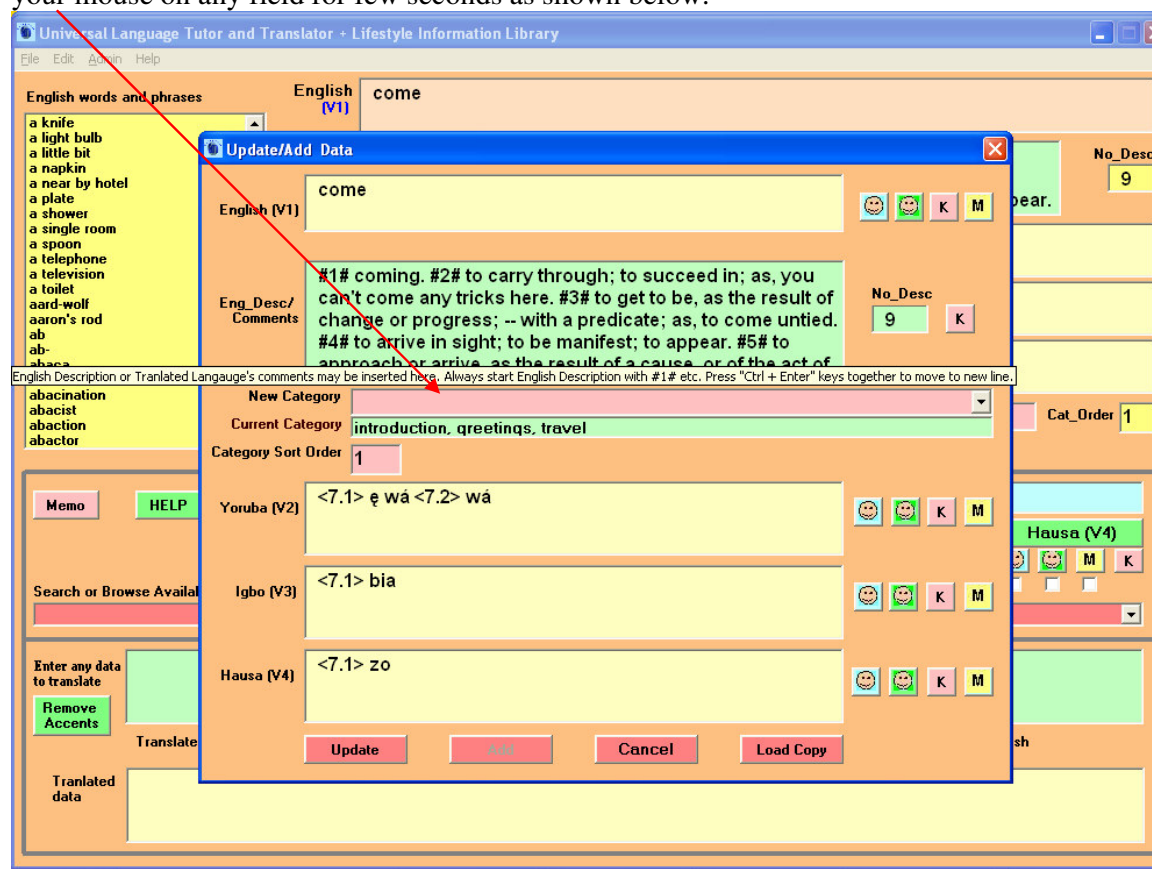
Use the Help Menu as shown below:



The help file shown below is displayed when F1 is pressed while on any of the Forms



Finally and most importantly, a quick guide is displayed when you move and leave your mouse on any field for few seconds as shown below:



Chapter 4 Using the keyboards with special accented characters

The application has been developed to allow Unicode characters to be added into the database to represent the characters with accents usually used for tonal languages. The keyboard can be activated (by pressing the K button as shown below) at any time during data input or simply use to key in the data. When the OK button of the keyboard is pressed the data from the keyboard field is transferred to the field intended.

Using Special Keyboard to Search for data with accented characters

To insert an accented character into the Yoruba field shown below, enter the first character in the “Enter data to search” field e.g. “e” and then press the K button under the “Yoruba” main button. Note that you can enter normal characters in to the keyboard as well:

Universal Language Tutor and Translator (SORO - NIGERIA) + Lifestyle Information Library

File Edit Admin Video-Tutorials Help

English words and phrases

television
a television
a shower
bathroom
a bathroom
a double room
a single room
a clean hotel
a good hotel
guesthouse
train station
airport
motorbike
helicopter
four wheel drive

English (V1) come

Eng_Desc/Comments #1# coming. #2# to carry through; to succeed in; as, you can't come any tricks here. #3# to get to be, as the result of change or progress; ~ with a predicate; as, to come untied. #4# to arrive in sight; to be manifest; to appear. #5# to approach

No_Desc 9

Yoruba (V2) <7.1> ẹ wá <7.2> wá

Igbo (V3) <7.1> bia

Hausa (V4) <7.1> zo <7.2> yaka <7.3> yaki

Category introduction, greetings, travel

Cat_Order 1

Update Add Delete! Quiz Mode

Word/Phrase Searching and Multimedia Record/Playback System

Enter data to search come

Search for

Category English (V1) Yoruba (V2) Igbo (V3) Hausa (V4)

Eng_Desc

Search for Available Categories below

Language Translation System for Words/Phrases/Sentences in any of the above Languages

Enter data to translate

Remove Accents

Translated data

Translate English to Yoruba Igbo Hausa

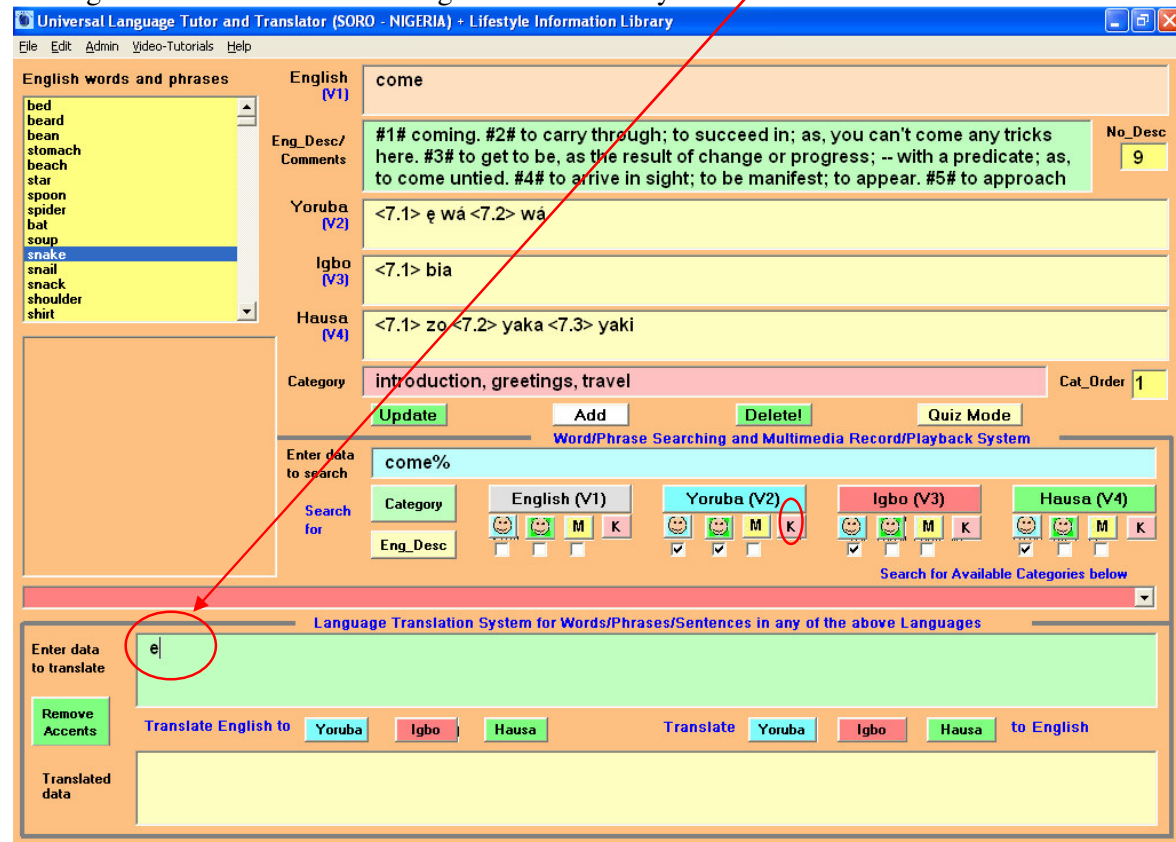
Translate Yoruba Igbo Hausa to English

The above is an example of how the accented characters can be activated.

Using Accented Keyboard to Translate Other Language

Using accented Keyboard to Translate Other Language to English or simply used for any English data with accents

To translate the Yoruba phrase “ẹ wá” with accented character to English, enter the first non-accented character in the “Enter any data to translate” field e.g. “e” and then press the K button under the “Yoruba” main button in exact manner explained above. This illustrates that keyboard sharing exists between the searching and translation systems.



Universal Language Tutor and Translator (SORO - NIGERIA) + Lifestyle Information Library

File Edit Admin Video-Tutorials Help

English words and phrases

- bed
- beard
- bean
- stomach
- beach
- star
- spoon
- spider
- bat
- soup
- snake
- snail
- snack
- shoulder
- shirt

English (V1) come

Eng_Desc/Comments #1# coming. #2# to carry through; to succeed in; as, you can't come any tricks here. #3# to get to be, as the result of change or progress; -- with a predicate; as, to come untied. #4# to arrive in sight; to be manifest; to appear. #5# to approach

No_Desc 9

Yoruba (V2) <7.1> ẹ wá <7.2> wá

Igbo (V3) <7.1> bia

Hausa (V4) <7.1> zo <7.2> yaka <7.3> yaki

Category introduction, greetings, travel Cat_Order 1

Update Add Delete! Quiz Mode

Word/Phrase Searching and Multimedia Record/Playback System

Enter data to search come%

Search for

Category English (V1) Yoruba (V2) Igbo (V3) Hausa (V4)

Eng_Desc

Search for Available Categories below

Language Translation System for Words/Phrases/Sentences in any of the above Languages

Enter data to translate e

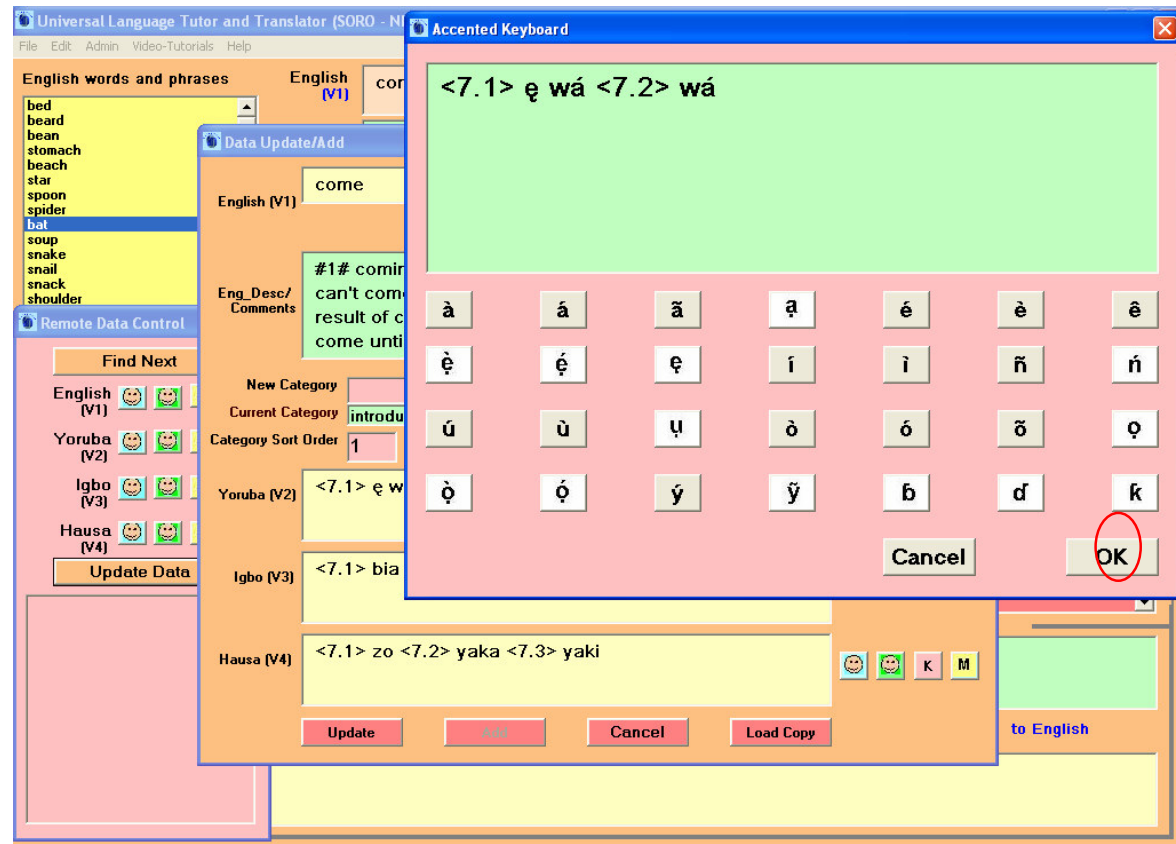
Remove Accents

Translated data

Translate English to Yoruba Igbo Hausa Translate Yoruba Igbo Hausa to English

Using the accented keyboard for data update

When the data has been updated, the “Update” keyboard is pressed, the accented keyboard corresponding to the field been updated should be selected (select icon with “K”) in order to insert a character with accent as shown below, enter the OK button to transfer the accented characters and other characters to the original field as shown below:

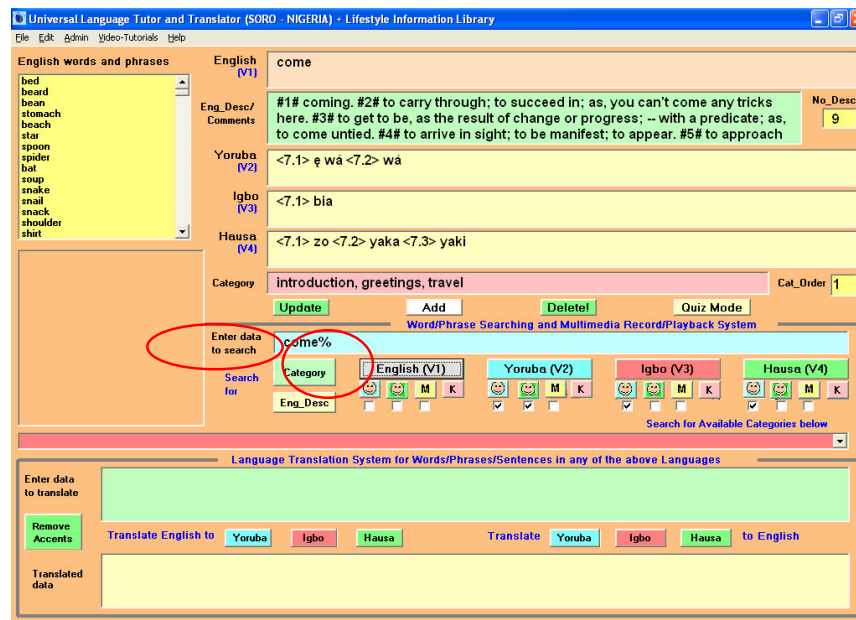


Chapter 5 Searching for words/phrases

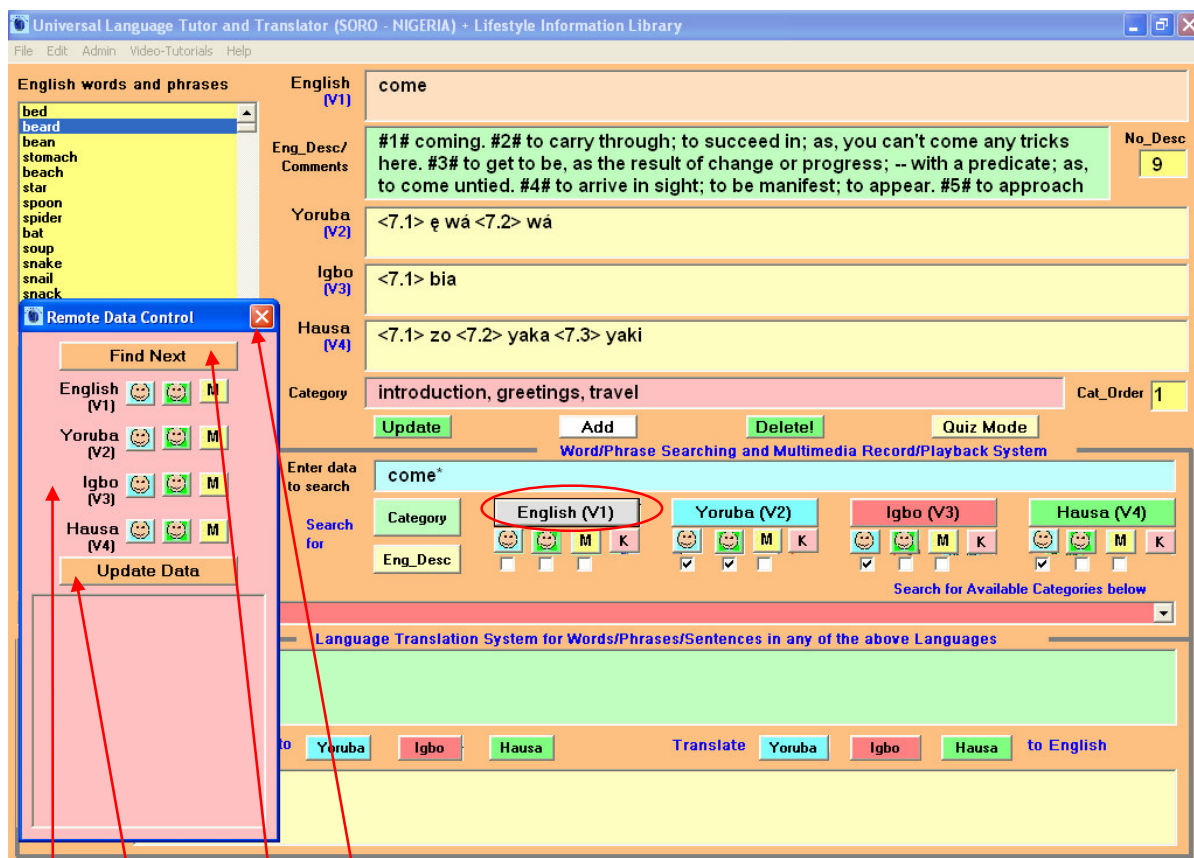
The search process is carried out by entering the word/phrase into the “Enter data to search” field as shown below. Note: the data entered here for searching can be English, Yoruba, Igbo or Hausa. This can be used to search for interpretations in the following languages: English, Yoruba, Igbo or Hausa.

Categories and English_Description can be searched for by entering the related data in the “Enter data to Search” field and then selecting the category or Eng_Dec button to search for the related information e.g. if data to search is “travel” and the category button was selected, all data relating to travel will be displayed.

See a search example below for the word “come%” which indicates that system searches for English word starting with “come”.





To search for data starting with come use “come%” as shown above and then select “English” button as shown above. The result of the search is shown below:



The “Remote Data Control” form illustrated by item (1) above will always pop up when a search is made. This form allows the Next item to be searched for. Item (2) Update data button allows data Update to be performed without closing the searching process. Item (3) Find Next button is used to find the next item that matches the search criteria while item (4) is used to exit or close this form.

Record Audio Data

Play back or record audio data for the first time on the “Remote Data Control” Form or on any active form in the application by using this icon 


Play back or record dialog audio data for the first time on the “Play/update remote control” Form or on any active form in the application by using this icon 

When an audio data is not found, you will get an option for recording the audio data by using the recorder as illustrated below when the audio icon is selected:



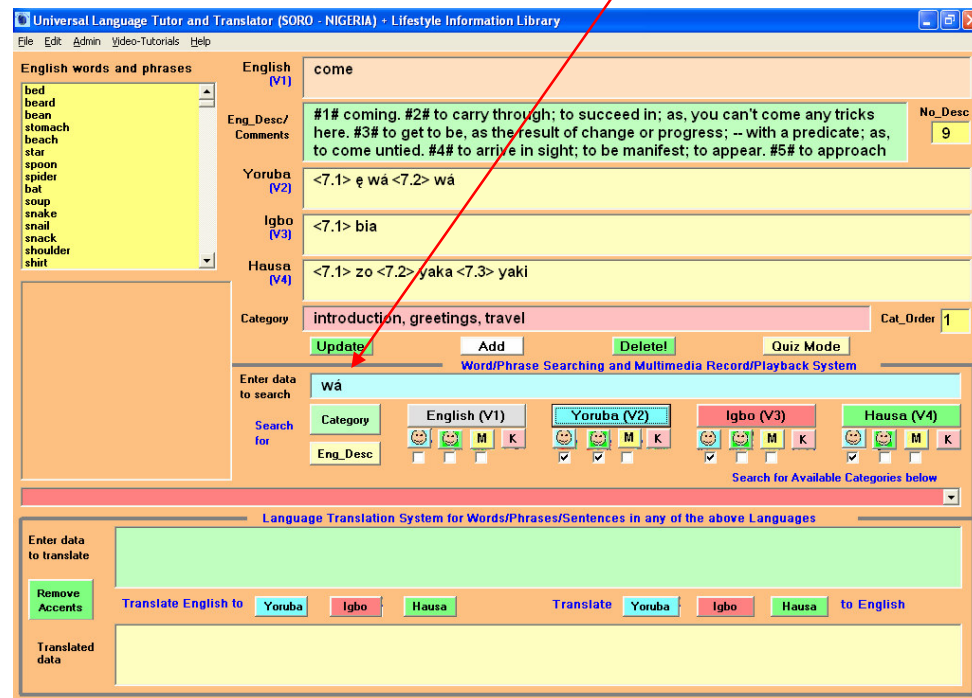
Select “Yes” to proceed



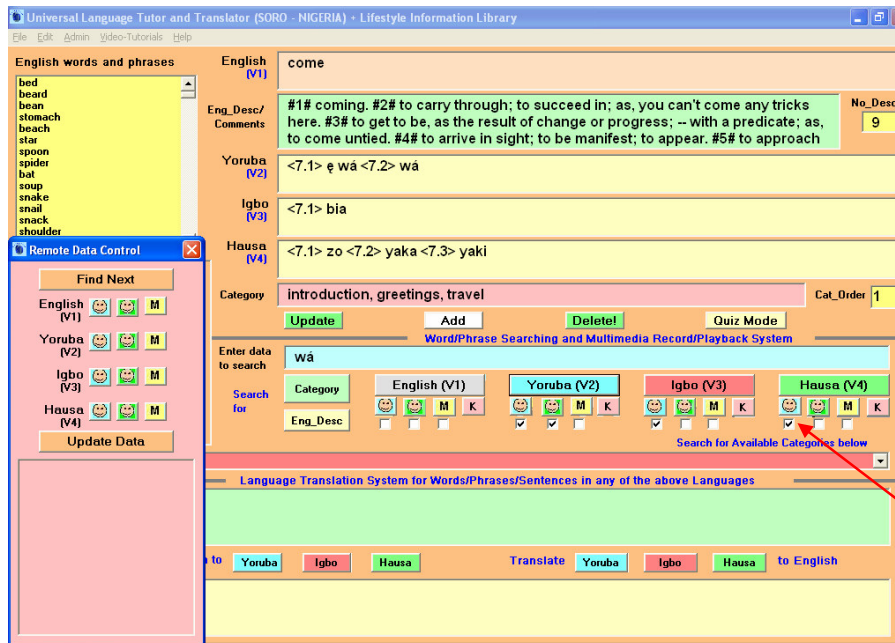
Display /import Multi-media data by selecting this icon, on the “*Remote Data Control*” Form or any form in the application by using this icon 

Search for Yoruba, Igbo or Hausa word/phrase

To search for Yoruba word containing “wá” note that letter “a” has accented character. The searching process will return any data with wa or wá. To perform this search, see screen dump below:



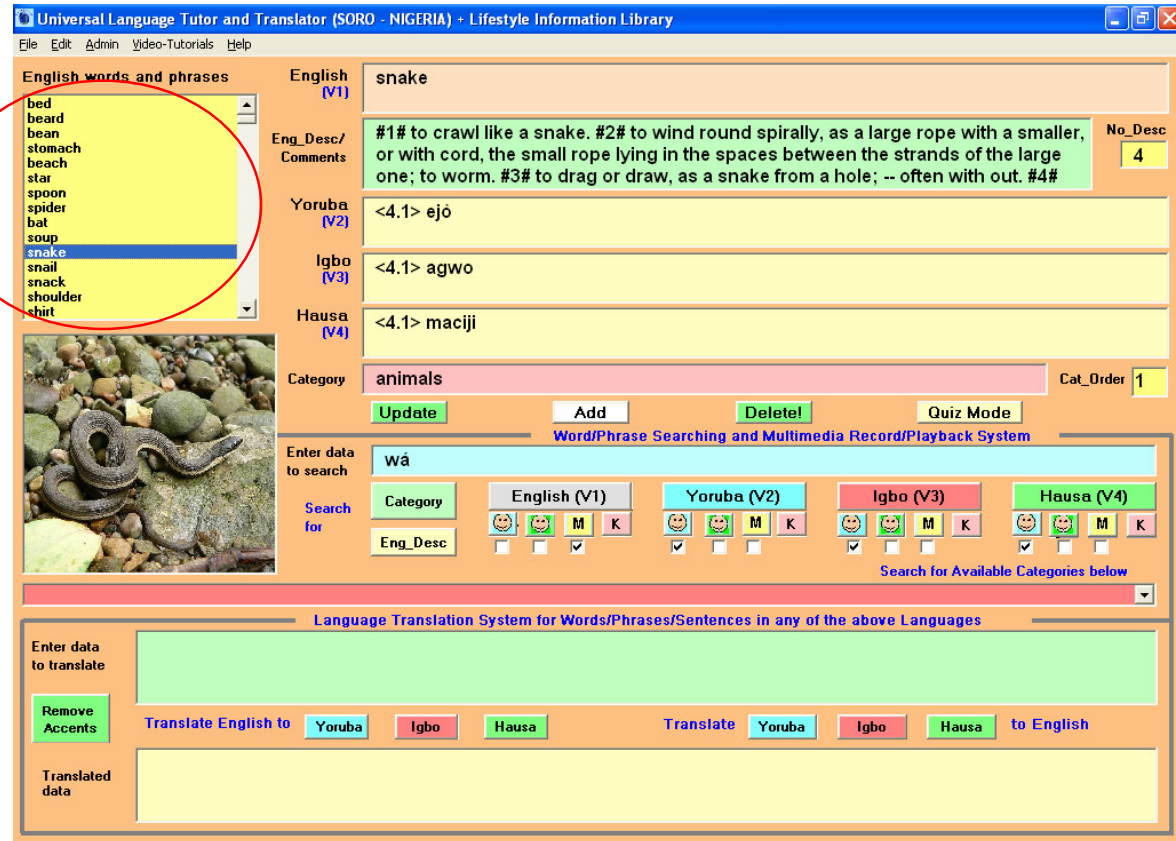
The result below shows Yoruba data “wa” returned in the search.



For any returned data you can then play the audio or multi-media data indicated by the tick “√” in the check box underneath the audio or multi-media icon as shown below: For instance, the screen below indicates the Yoruba data has an audio that pronounces the Yoruba phrase “ẹ wá”. The audio data can be heard when the icon (see the blue faced icon highlighted) below is selected. You can find next data by clicking on “*Remote Data Control*” button.

Search by Browsing

Visual search by scrolling through the displayed data is also possible as shown below; you can browse through available data with the translations instantly displayed with graphics where applicable.



Search using the Category information

Every data saved in the system has category information that helps to group all logical data together to simplify the searching.

To search for available category, select the category as shown below and the system will prompt to play audio, select “Yes” to see the “Remote Control Form” to control search result data.

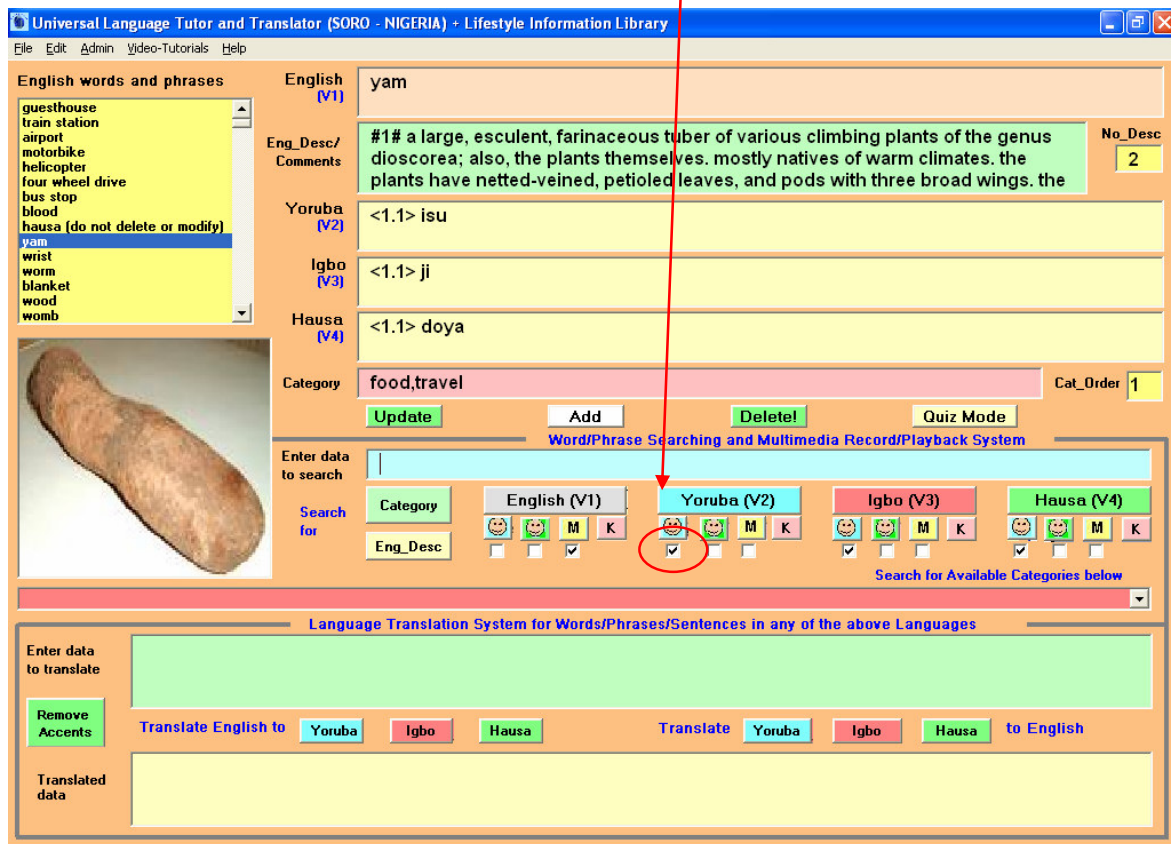
The screenshot displays the 'Universal Language Tutor and Translator (SORO - NIGERIA) - Lifestyle Information Library' window. The interface is divided into several sections:


- English words and phrases:** A list of items including 'a drink', 'a cup', 'a corkscrew', 'a bottle opener', 'another bottle', 'a bottle of beer', 'a bottle of water', 'a glass of water', 'ashtray', 'an ashtray', 'suitcase', 'mosquito coil', 'mosquito net', 'double bed', and 'a light bulb'. An image of a suitcase is shown below this list.
- English (V1):** The word 'suitcase' is entered.
- Eng_Desc/Comments:** The text '#1# suitcase' is displayed.
- No_Desc:** The value '1' is shown.
- Yoruba (V2):** The text '<1.1> apòtì ẹ̀rù' is displayed.
- Igbo (V3):** The text '<1.1> akpati ùwe' is displayed.
- Hausa (V4):** The text '<1.1> jakan kaya' is displayed.
- Category:** The text 'accommodation, travel' is entered.
- Cat_Order:** The value '1' is shown.
- Buttons:** 'Update', 'Add', 'Delete!', and 'Quiz Mode' are available.
- Word/Phrase Searching and Multimedia Record/Playback System:** This section includes a 'Search for' field and a table of search criteria.
- Search for Available Categories below:** A list of categories including 'dressing, travel', 'emergency, travel', 'family', 'family, people', 'food, travel', 'greetings', 'greetings, travel', and 'human body'.
- Translated data:** A large empty box for the results.


A red arrow points from the 'greetings, travel' category in the 'Search for Available Categories below' list to the 'Category' field in the 'English (V1)' section.

Chapter 6 Recording and Playing Back Multimedia and Electronic File Data

Multi-media files can be played back for any word/phrase or data stored in the software. When ever the multi-media data exists the file can be played back. Check boxes located just underneath the multi-media icons are used to indicate whether a data is available or not as illustrated below:




Play back or record for the first time the audio data by selecting this icon 

Play back or record Dialog audio data for the first time by selecting this icon 

The screen below is used to record audio data for the first time by selecting the play button.



For update on audio data use the “Update” button.

Play back or import Multi-media data such as pictures etc by selecting this icon 

Changing a recorded multi-media or audio data

A recorded data can be changed using the “Update” button shown below, the Update form is displayed from the main form or during a record “Add” process.

 The screenshot shows the main window of the "Universal Language Tutor and Translator (SORO - NIGERIA) + Lifestyle Information Library". The window has a menu bar (File, Edit, Admin, Video-Tutorials, Help) and a toolbar. On the left, there is a list of "English words and phrases" including guesthouse, train station, airport, motorbike, helicopter, four wheel drive, bus stop, blood, hausa (do not delete or modify), yam, wrist, worm, blanket, wood, and womb. The main area displays data for the word "come". It includes fields for English (V1), Yoruba (V2), Igbo (V3), and Hausa (V4), each with a description and a "No_Desc" field. The "Update" button is circled in red. Below the main data fields, there is a "Category" field with the value "introduction, greetings, travel" and a "Cat_Order" field with the value "1". At the bottom, there is a "Language Translation System for Words/Phrases/Sentences in any of the above Languages" section with input fields for "Enter data to translate" and "Translated data", and buttons for "Remove Accents", "Translate English to", and "Translate" for each language.

The above “Update” will display the Update form as shown below:

Update/Add Data

English (V1)

Eng_Desc/Comments

New Category

Current Category

Category Sort Order

Yoruba (V2)

Igbo (V3)

Hausa (V4)

From the above, change any appropriate data and select “Update” button to save the changes. Any of the Multi-media buttons should be selected to change or record new data.

Any audio data can be replaced by selecting the audio icon for the language you intend to change. For instance to change a Yoruba audio data, you will be prompted with the message shown below once the audio icon beside Yoruba is selected as illustrated below:

Data Maintenance

? RECORD Yoruba audio File?

If you select “Yes” then the recorder (shown below) is displayed to allow the user to replace or create a new recording for the language.

Record Audio Data

Adding graphical images and electronic files to support translated data

Graphical images such as jpg, bmp and gif pictures and electronic file such as word file (.DOC), excel (.XLS), AVI, WAV, MP3, MP4 or any electronic file can be added to any words/phrases stored in SORO Nigeria.

Addition of electronic images may provide further information to describe the English, Yoruba, Igbo or Hausa words/phrases being translated e.g. pictures of an English, Igbo, Yoruba and Hausa man can be inserted in the software clearer illustration. Also, food recipe or class notes for a school subject with audio data can be stored in SORO Nigeria under the lifestyle information module of the software. Students can search for the appropriate subject and lessons and study it with the supporting audio data from the teacher.

Example below shows how to add the picture of Yam to support the word “yam” in SORO Nigeria:

From the “Update Form shown below or by simply selecting the “M” button under the English Language, you can add the multimedia or any electronic file:

The screenshot displays the 'Universal Language Tutor and Translator (SORO - NIGERIA) - Lifestyle Information Library' window. The interface is divided into several sections:

- English words and phrases:** A list on the left includes 'guesthouse', 'train station', 'airport', 'motorbike', 'helicopter', 'four wheel drive', 'bus stop', 'blood', 'hausa (do not delete or modify)', 'yam', 'wrist', 'worm', 'blanket', 'wood', and 'womb'. 'yam' is selected.
- English (V1):** The word 'yam' is entered.
- Eng_Desc/Comments:** A detailed description of yam is provided: '#1# a large, esculent, farinaceous tuber of various climbing plants of the genus dioscorea; also, the plants themselves. mostly natives of warm climates. the plants have netted-veined, petioled leaves, and pods with three broad wings. the'. The 'No_Desc' field contains the number '2'.
- Yoruba (V2):** The translation '<1.1> isu' is entered.
- Igbo (V3):** The translation '<1.1> ji' is entered.
- Hausa (V4):** The translation '<1.1> doya' is entered.
- Category:** 'food,travel' is selected.
- Cat_Order:** '1' is entered.
- Buttons:** 'Update' (circled in red), 'Add', 'Delete!', and 'Quiz Mode' are visible.
- Search Section:** 'Enter data to search' is set to 'yam'. Below are buttons for 'Category', 'English (V1)', 'Yoruba (V2)', 'Igbo (V3)', and 'Hausa (V4)'. Each language button has a set of icons (smiley face, M, K). The 'M' icon under 'English (V1)' is circled in red.
- Translation Section:** A header reads 'Language Translation System for Words/Phrases/Sentences in any of the above Languages'. It includes a 'Remove Accents' button, a 'Translated data' field, and buttons for 'Translate English to Yoruba', 'Igbo', 'Hausa', and 'Translate Yoruba', 'Igbo', 'Hausa to English'.

If you select the “Update” button above you get the form shown below, you then select the “M” key or the “M” key in the main form shown above to import the electronic file into SORO Nigeria:

Data Update/Add

English (V1)

Eng_Desc/Comments

No_Desc

New Category

Current Category

Category Sort Order

Yoruba (V2)

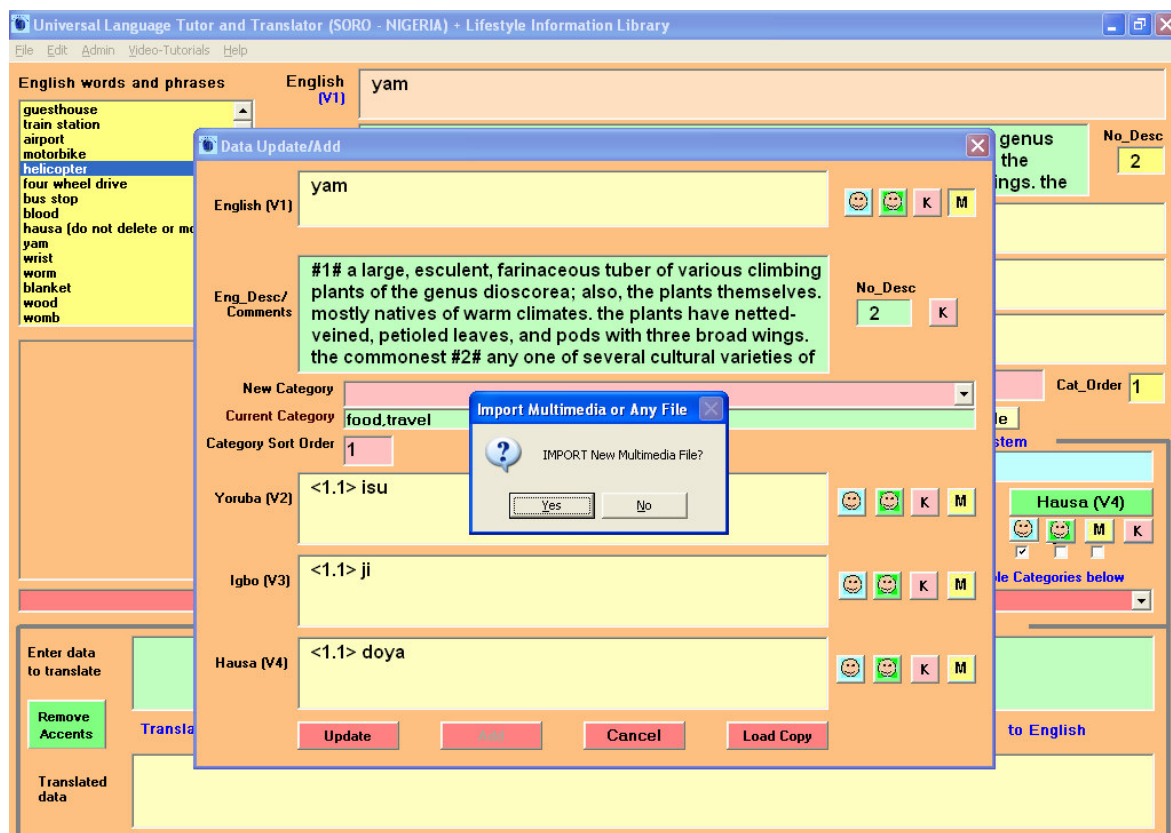
Igbo (V3)

Hausa (V4)

Update Add Cancel Load Copy

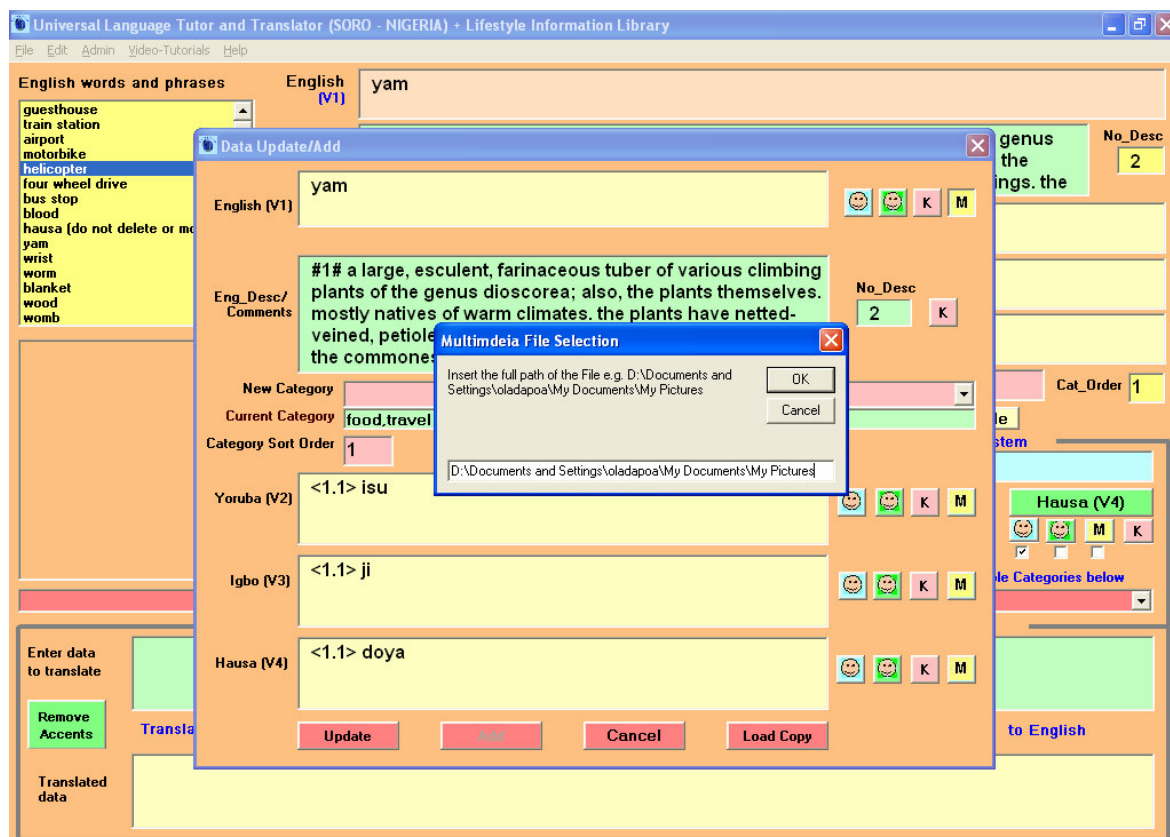
Buttons: Smiley Face, Green Square, K, M (circled in red)

Once you select the “M” key the form below is displayed asking you to select “Yes” to load the electronic file. Select “Yes” and continue with the processing.



You get the form displayed below:

Enter the path where the electronic file resides, see example below:



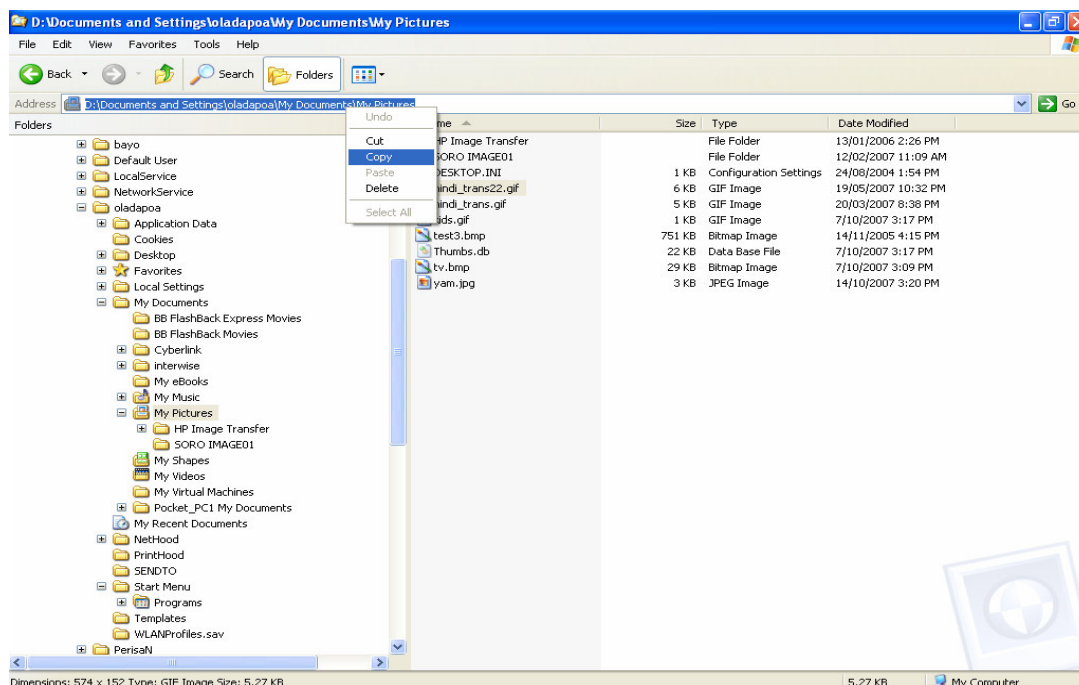
Note: a sample file path can be

D:\Documents and Settings\johnpc\My Documents\My Pictures

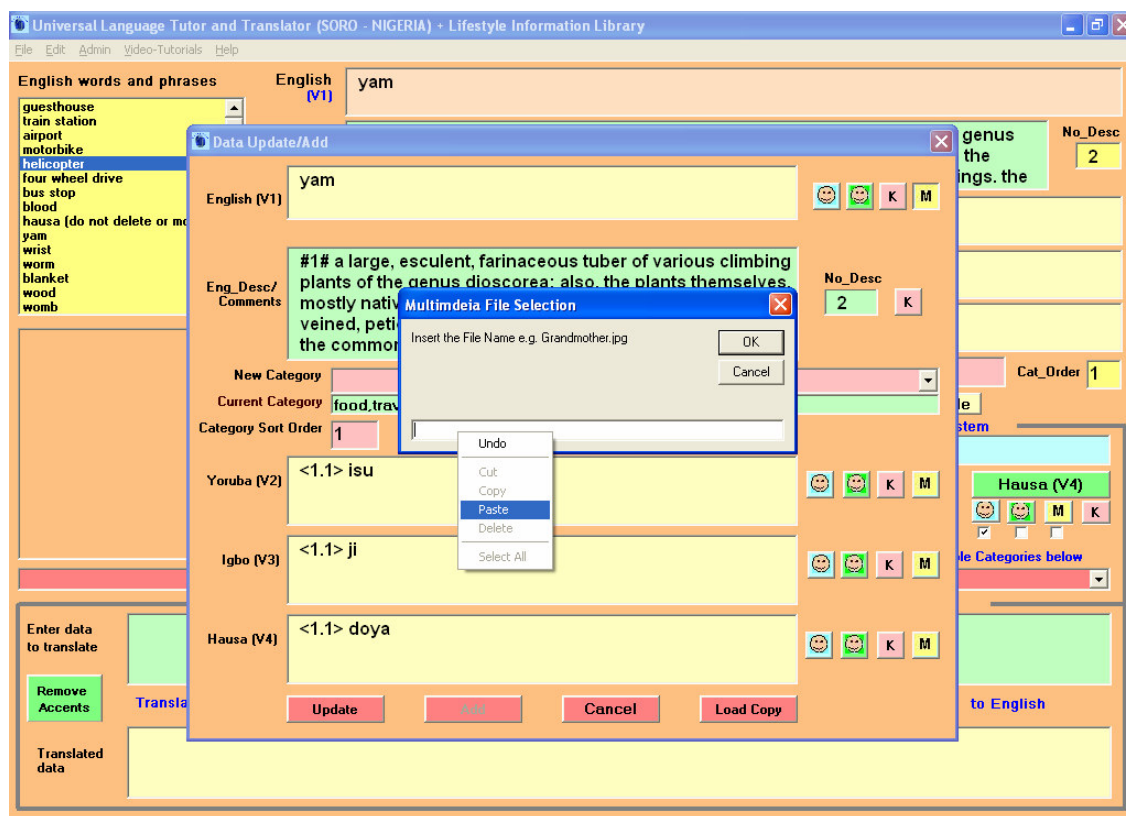
or

D:\Documents and Settings\johnpc\My Documents\My Pictures\

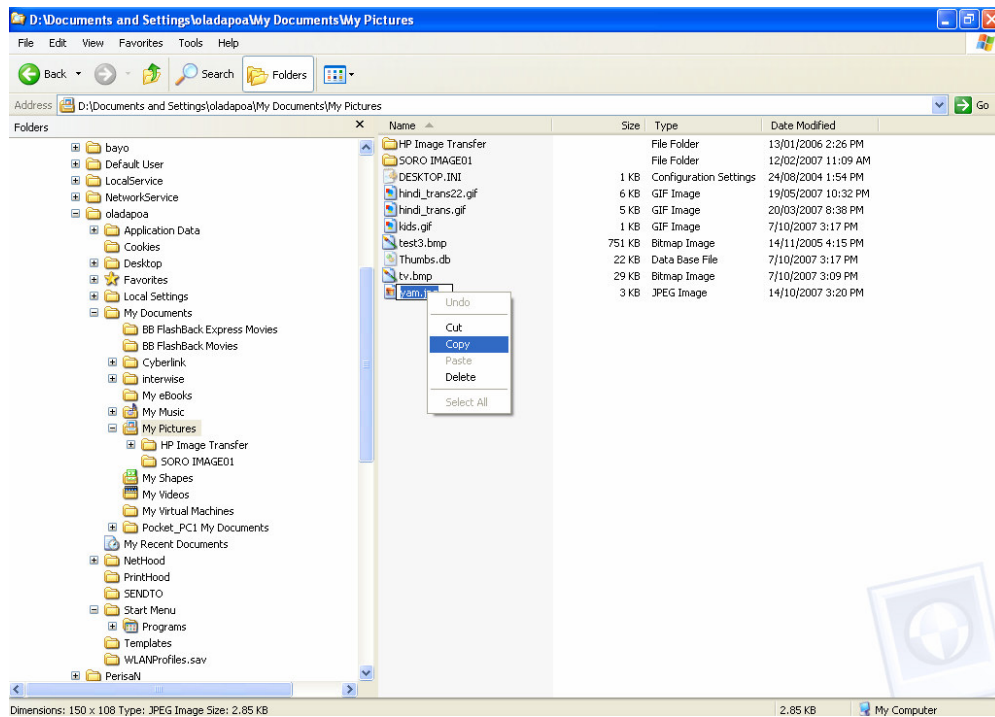
See screen dump below illustrating how to copy the path using Windows Explorer. The copied path is then pasted or typed into the form shown above. Select the “OK” button to continue.



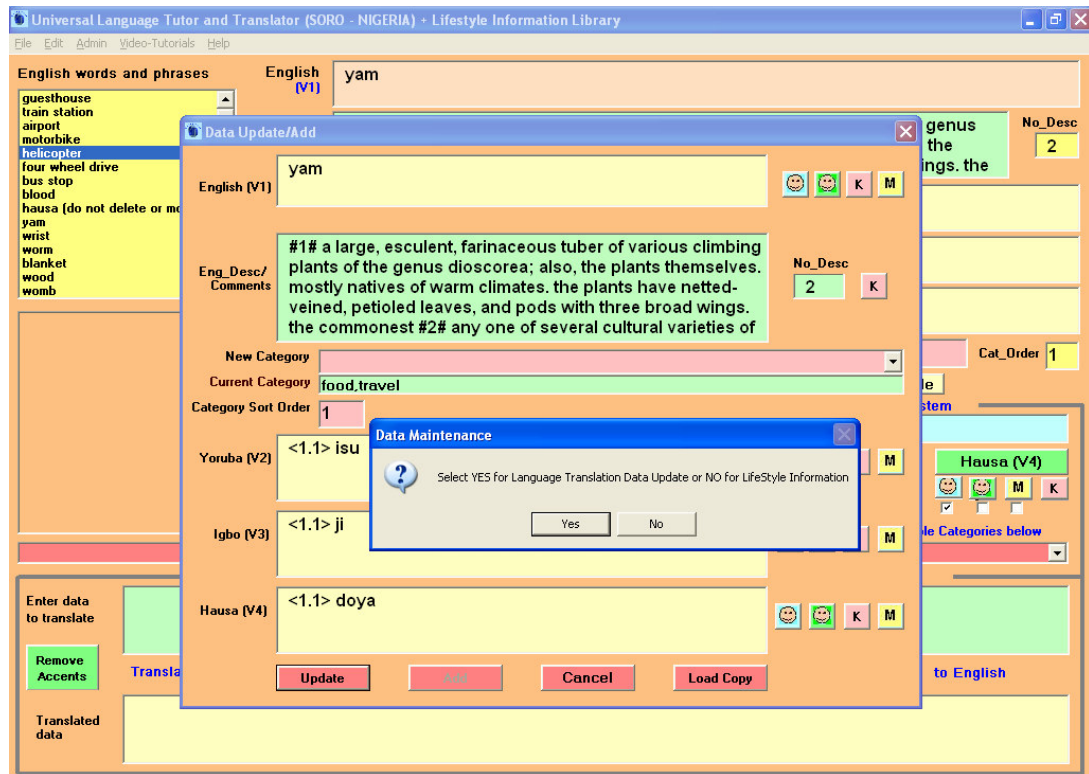
The form to enter the file name is prompted as shown below:



The file name is also copied (or type file name into the prompted field) as shown below from Windows Explorer and pasted into the above field. Select the “OK” button to accept the file name supplied.



Select the “Update” key as shown below to save the data:



Select “Yes” to save the data as language related information instead of lifestyle information. Finally you will see the picture of the yam in SORO Nigeria shown below:



Chapter 7 Adding new record

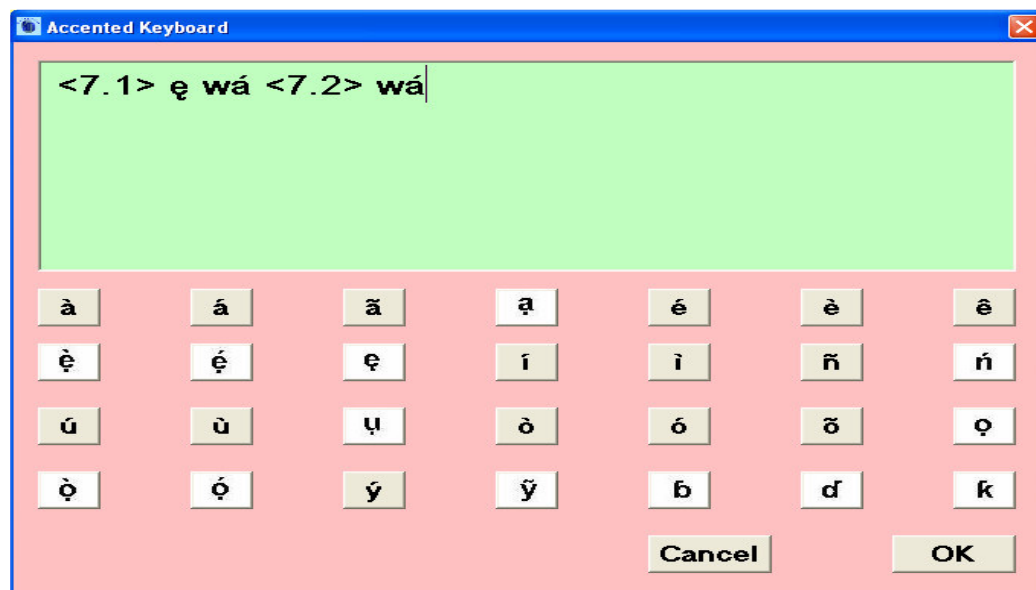
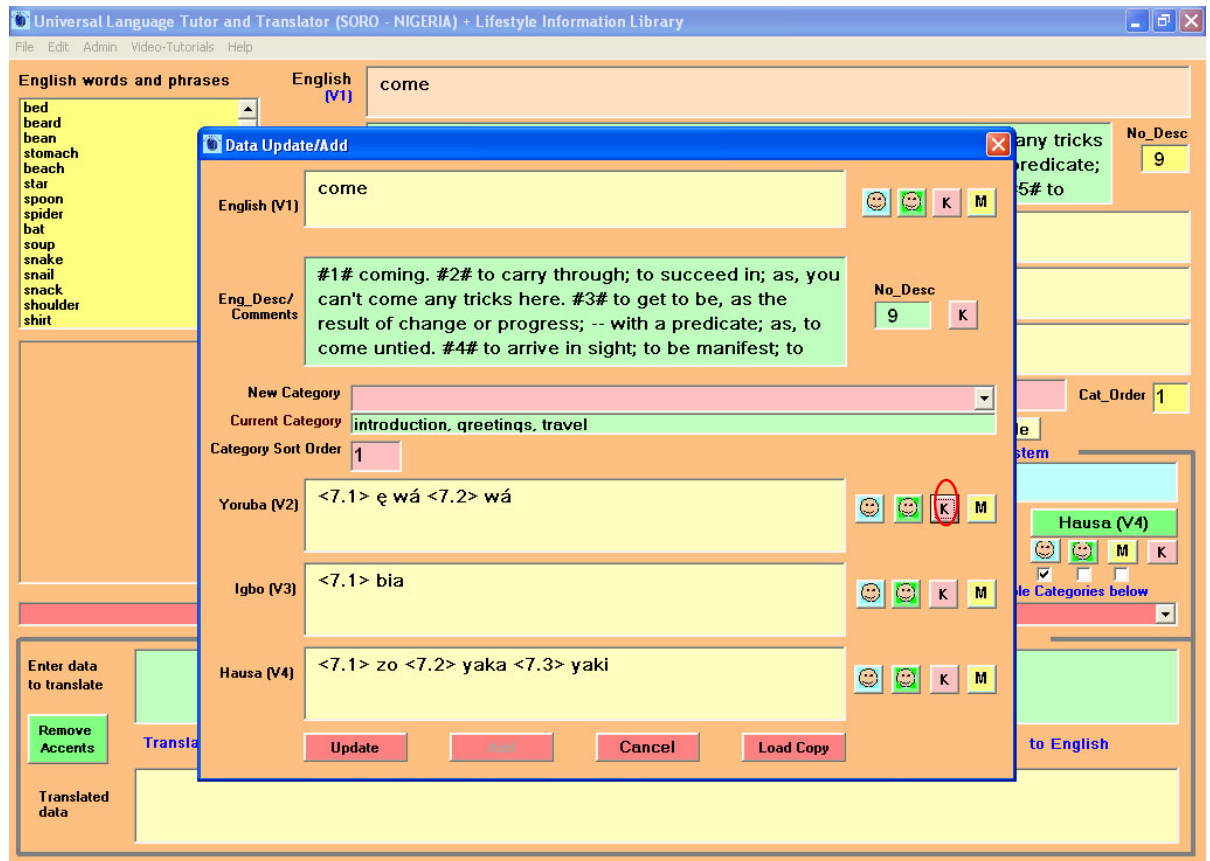
The exercise illustrated here shows how the word “Come” was translated in Yoruba, Igbo and Hausa. New data is recorded by selecting the “Add” button from the main form as shown below:

The screenshot shows the 'Universal Language Tutor and Translator (SORO - NIGERIA) + Lifestyle Information Library' window. The interface includes a menu bar (File, Edit, Admin, Video-Tutorials, Help), a list of English words and phrases on the left, and a main form for adding new records. The main form contains fields for English words (V1), English description (V1), Yoruba (V2), Igbo (V3), Hausa (V4), Category, and Cat_Order. The 'Add' button is circled in red. Below the main form is a section for 'Enter data to search' with buttons for English (V1), Yoruba (V2), Igbo (V3), and Hausa (V4). At the bottom, there is a 'Language Translation System for Words/Phrases/Sentences in any of the above Languages' section with buttons for 'Translate English to Yoruba', 'Igbo', 'Hausa', and 'Translate Yoruba', 'Igbo', 'Hausa to English'.

The Add Form is displayed to add new record or lifestyle information to the database, enter “come” as shown below:

New data is entered and “Add” button selected to process data, the next form will be the “Update” form. Select the “K” button for the Yoruba translation as illustrated below to use the accented keyboard to enter the special Yoruba characters. Note: two translated data were entered for Yoruba meaning of “come” as shown below to differentiate one for asking an elder or group of people to come prefixed with “<7.1> ẹ wá” and the other prefixed with “<7.2> wá” for asking a junior or mate to come.

Note: SORO Nigeria has been programmed to display this information to the end user to select the appropriate data (i.e. “ẹ wá” or “wá”) in context of the English sentence being translated when using the “Translation Section” to translate English sentence(s).





Accented keyboard shown above.

Update/Add Data

English (V1)

come

K

M

Eng_Desc/Comments

#1# coming. #2# to carry through; to succeed in; as, you can't come any tricks here. #3# to get to be, as the result of change or progress; -- with a predicate; as, to come untied. #4# to arrive in sight; to be manifest; to appear. #5# to approach or arrive, as the result of a cause, or of the act of

9

K

New Category

Current Category



introduction, greetings, travel

Category Sort Order

1

Yoruba (V2)

<7.1> ẹ wá <7.2> wá






K

M

Igbo (V3)

<7.1> bia






K

M

Hausa (V4)

<7.1> zo

K

M

Update

Add

Cancel

Load Copy

You can add audio and graphical images to support the translated data as shown above. The “Update” button is pressed to finalise the record creation process after other relevant data have been entered. Refer to chapter 6 to add audio and/or Multimedia data to the above data if required.

Chapter 8 Updating Existing Information

A recorded data can be changed using the “Update” button shown below, the Update form is displayed from the main form or during a record “Add” process.

The screenshot displays the 'Universal Language Tutor and Translator + Lifestyle Information Library' window. The main form is titled 'English (V1)' and shows the word 'come'. Below this, the 'Eng_Desc/Comments' field contains a detailed explanation: '#1# coming. #2# to carry through; to succeed in; as, you can't come any tricks here. #3# to get to be, as the result of change or progress; -- with a predicate; as, to come untied. #4# to arrive in sight; to be manifest; to appear.' The 'No_Desc' field shows the number '9'. The 'Yoruba (V2)' field contains '<7.1> ẹ wá <7.2> wá', the 'Igbo (V3)' field contains '<7.1> bia', and the 'Hausa (V4)' field contains '<7.1> zo'. The 'Category' field is set to 'introduction, greetings, travel' and the 'Cat_Order' field is set to '1'. A red arrow points from the text 'the Update form is displayed from the main form or during a record “Add” process.' to the 'Update' button. The interface also includes a 'Memo' section, a 'HELP' button, a 'Search For' section, and a 'Language Translation System' section at the bottom.

Universal Language Tutor and Translator + Lifestyle Information Library

File Edit Admin Help

English words and phrases

- a knife
- a light bulb
- a little bit
- a napkin
- a near by hotel
- a plate
- a shower
- a single room
- a spoon
- a television
- a toilet
- aard-wolf
- aaron's rod
- ab
- ab-
- abaca
- abaci
- abacination
- abacist
- abaction
- abactor

English (V1) come

Eng_Desc/Comments #1# coming. #2# to carry through; to succeed in; as, you can't come any tricks here. #3# to get to be, as the result of change or progress; -- with a predicate; as, to come untied. #4# to arrive in sight; to be manifest; to appear.

No_Desc 9

Yoruba (V2) <7.1> ẹ wá <7.2> wá

Igbo (V3) <7.1> bia

Hausa (V4) <7.1> zo

Category introduction, greetings, travel

Cat_Order 1

Update Add Delete!

Searching and Multimedia System

Memo HELP

Enter data to search come%

Search For

Search or Browse Available Categories

Language Translation System

Enter any data to translate

Remove Accents

Translate English to Yoruba Igbo Hausa

Translate Yoruba Igbo Hausa to English

Translated data

The Update form is displayed as shown below:

Update/Add Data

English [V1]

Eng_Desc/Comments

New Category

Current Category

Category Sort Order

Yoruba [V2]

Igbo [V3]

Hausa [V4]

Data Translation Format

From the Update form above you can also see that the meaning of “Come” for the translated Yoruba, Hausa and Igbo languages ONLY relates to the 7th meaning of “come” in English which is illustrated by the delimited meaning of **“#7# to complete a movement toward a place; to arrive”**, hence Yoruba translation is “<7.1> ẹ wá <7.2> wá”. Note: If #7# does not exist in the “Eng_Desc/Comments” field, the update will not be successful. This is because it must relate to an existing meaning of the English data.

Yoruba is also a language that gives respect to individual according to their age and/or status, for instance people expects that “come” be translated in relation to the age of the person you are talking to. For example, the Yoruba translation of “come” has two meanings as illustrated in the screen dump above with “@@ yoruba meaning: to a senior or group of people you say “<7.1> ẹ wá“ to a junior or mate you say “<7.2> wá” @@”. The “Eng_Desc/Comments” field can be used to express such translation to give more accurate meaning to the translation thus guiding the user to select the appropriate translation.

Adding alternate translated data

An example below illustrates how extra data can be added when translating the English sentence “I am married” to Yoruba. The first data entered is “<1.1> mo ti ní olólùfẹ́” if a second data is to be added, you first write <1.2> to differentiate this translation of “I am married” in Yoruba from the first description of “I am married” <1.1>. Note: in all cases, if there is no entry for the English_Description, the system will by default use the English words/phrases as the English_Description. The alternate translation of “mo ti ni aya” is then appended to <1.2> thus making the update to look like this “<1.1> mo ti ní olólùfẹ́ <1.2> mo ti ni aya”.

Finally you can then create “<1.1> mo ti ní olólùfẹ́ <1.2> mo ti ni aya <1.3> mo ti ni ọkọ” for Yoruba data. For Igbo you then have “<1.1> alụọla m nwanyi <1.2> alụọla m di”.

The screenshot shows a software window titled "Update/Add Data". It contains several input fields and buttons for managing translation data.

- English [V1]:** A text box containing "i am married". To its right are four small icons: a smiley face, a sad face, a pink box with "K", and a yellow box with "M".
- Eng_Desc/Comments:** A large text area containing two paragraphs of text:
@@ ibo meaning: to a man you say: "<1.1> alụọla m nwanyi" :to a lady you say: <1.2> alụọla m di
@@ yoruba meaning: to any sex you say: "<1.1> mo ti ní olólùfẹ́" to a man you say: "<1.3> mo ti ni ọkọ" :to a lady you say: "<1.2> mo ti ni aya"
To the right of this text area is a "No_Desc" label, a green box with the number "1", and a pink box with the letter "K".
- New Category:** A dropdown menu with a pink background.
- Current Category:** A text box containing "introduction, greetings" with a green background.
- Category Sort Order:** A text box containing the number "1" with a pink background.
- Yoruba [V2]:** A text box containing "<1.1> mo ti ní olólùfẹ́ <1.2> mo ti ni aya <1.3> mo ti ni ọkọ". To its right are four small icons: a smiley face, a sad face, a pink box with "K", and a yellow box with "M".
- Igbo [V3]:** A text box containing "<1.1> alụọla m nwanyi <1.2> alụọla m di". To its right are four small icons: a smiley face, a sad face, a pink box with "K", and a yellow box with "M".
- Hausa [V4]:** An empty text box. To its right are four small icons: a smiley face, a sad face, a pink box with "K", and a yellow box with "M".

At the bottom of the window are four buttons: "Update", "Add", "Cancel", and "Load Copy".

Deleting Alternate Translated data

As illustrated in the screen dump below, let us assume that you want to remove the translation of “**mo ti ni aya**”. You will need to highlight this data with its preceding identification tag of **<1.2>** as shown below. This means that “**<1.2> mo ti ni aya**” must be deleted from the Yoruba translation and not “**mo ti ni aya**” alone.

The screenshot shows a software window titled "Update/Add Data" with a blue title bar and a close button (X) in the top right corner. The window has a light orange background and contains several input fields and buttons.

English (V1): A text box containing "i am married". To its right are four small icons: a blue smiley face, a green smiley face, a pink button labeled "K", and a yellow button labeled "M".

Eng_Desc/Comments: A text box containing two lines of text:
@@ ibo meaning: to a man you say: "<1.1> aluṣọla m nwanyi" :to a lady you say: <1.2> aluṣọla m di
@@ yoruba meaning: to any sex you say: "<1.1> mo ti ni olólùfẹ" to a man you say: "<1.3> mo ti ni ọkọ" :to a lady you say: "<1.2> mo ti ni aya"
To the right of this text box is a "No_Desc" label, a green text box containing the number "1", and a pink button labeled "K".

New Category: A dropdown menu with a pink background and a downward arrow.

Current Category: A text box containing "introduction, greetings" with a green background.

Category Sort Order: A pink text box containing the number "1".

Yoruba (V2): A text box containing "<1.1> mo ti ni olólùfẹ <1.2> mo ti ni aya <1.3> mo ti ni ọkọ". The tag "<1.2> mo ti ni aya" is highlighted in blue. To its right are four small icons: a blue smiley face, a green smiley face, a pink button labeled "K", and a yellow button labeled "M".

Igbo (V3): A text box containing "<1.1> aluṣọla m nwanyi <1.2> aluṣọla m di". To its right are four small icons: a blue smiley face, a green smiley face, a pink button labeled "K", and a yellow button labeled "M".

Hausa (V4): An empty text box. To its right are four small icons: a blue smiley face, a green smiley face, a pink button labeled "K", and a yellow button labeled "M".

At the bottom of the window are four buttons: "Update" (pink), "Add" (pink), "Cancel" (pink), and "Load Copy" (pink).

“<1.2> mo ti ni aya” can then be deleted from Yoruba translation as illustrated below. Note that in some cases the “Eng_Desc/Comments” field may need to be updated as well.

Update/Add Data

English (V1) [Smiley Face] [Sad Face] [K] [M]

Eng_Desc/Comments @@ yoruba meaning: to any sex you say: "<1.1> mo ti ni olólùfẹ" to a man you say: "<1.3> mo ti ni ọkọ" :to a lady"/> [1] [K]

New Category

Current Category

Category Sort Order

Yoruba (V2) [Smiley Face] [Sad Face] [K] [M]

Igbo (V3) [Smiley Face] [Sad Face] [K] [M]

Hausa (V4) [Smiley Face] [Sad Face] [K] [M]

Updating the Category data

Use the pull down list button on the “New Category” field to browse existing category as shown below and click on the Category of choice.

The screenshot shows a software window titled "Update/Add Data" with a blue title bar and a close button (X) in the top right corner. The window has an orange background and contains several input fields and buttons.

- English (V1)**: A yellow text box containing the word "come". To its right are four small icons: a blue smiley face, a green smiley face, a pink "K", and a yellow "M".
- Eng_Desc/Comments**: A green text box containing the text: "draw near; to approach the speaker, or some place or person indicated; -- opposed to go. #9# of come @@ yoruba meaning: to a senior or group of people you say "<7.1> ẹ wá" to a junior or mate you say "<7.2> wá" @@". To its right is a green box with the number "9" and a pink "K".
- New Category**: A dropdown menu is open, showing a list of categories. The categories are: "car, travel", "colour, travel", "communication, travel" (highlighted in blue), "culture, travel", "direction, travel", "dressing", "dressing, travel", and "emergency, travel".
- Current Category**: A text box containing "car, travel".
- Category Sort Order**: A text box containing "colour, travel".
- Yoruba (V2)**: A yellow text box containing "<7.1>".
- Igbo (V3)**: A yellow text box containing "<7.1> bia". To its right are four small icons: a blue smiley face, a green smiley face, a pink "K", and a yellow "M".
- Hausa (V4)**: A yellow text box containing "<7.1> zo". To its right are four small icons: a blue smiley face, a green smiley face, a pink "K", and a yellow "M".

At the bottom of the window are four buttons: "Update", "Add", "Cancel", and "Load Copy".

Adding a new Category data

Enter the new category data into the “New Category” field and click on the “Current Category” field to accept the data. Note, always update the category field before pressing the “Update” button.



The screenshot shows a software window titled "Update/Add Data" with a blue title bar and a close button (X) in the top right corner. The window has an orange background and contains several input fields and buttons.

- English (V1)**: A yellow text box containing the text "if one throws stone into the market it will hit one's relations". To its right are four small icons: a blue smiley face, a green smiley face, a pink box with 'K', and a yellow box with 'M'.
- Eng_Desc/Comments**: A green text box containing the text "#1# 'if one throws stone into the market it will hit one's relations'. this means that if one does evil he should expect it to affect his relations.". To its right is a label "No_Desc" above a green box containing the number "1" and a pink box with 'K'.
- New Category**: A pink dropdown menu currently showing "Yoruba_Proverbs".
- Current Category**: A green dropdown menu currently showing "no_category_setup".
- Category Sort Order**: A pink box containing the number "1".
- Yoruba (V2)**: A yellow text box. To its right are four small icons: a blue smiley face, a green smiley face, a pink box with 'K', and a yellow box with 'M'.
- Igbo (V3)**: A yellow text box. To its right are four small icons: a blue smiley face, a green smiley face, a pink box with 'K', and a yellow box with 'M'.
- Hausa (V4)**: A yellow text box. To its right are four small icons: a blue smiley face, a green smiley face, a pink box with 'K', and a yellow box with 'M'.

At the bottom of the window are four buttons: "Update" (pink), "Add" (pink), "Cancel" (pink), and "Load Copy" (pink).

The output is shown below:

Update/Add Data



English [V1] if one throws stone into the market it will hit one's relations   K M



Eng_Desc/
Comments #1# "if one throws stone into the market it will hit one's relations". this means that if one does evil he should expect it to affect his relations. No_Desc 1 K



New Category

Current Category

Category Sort Order

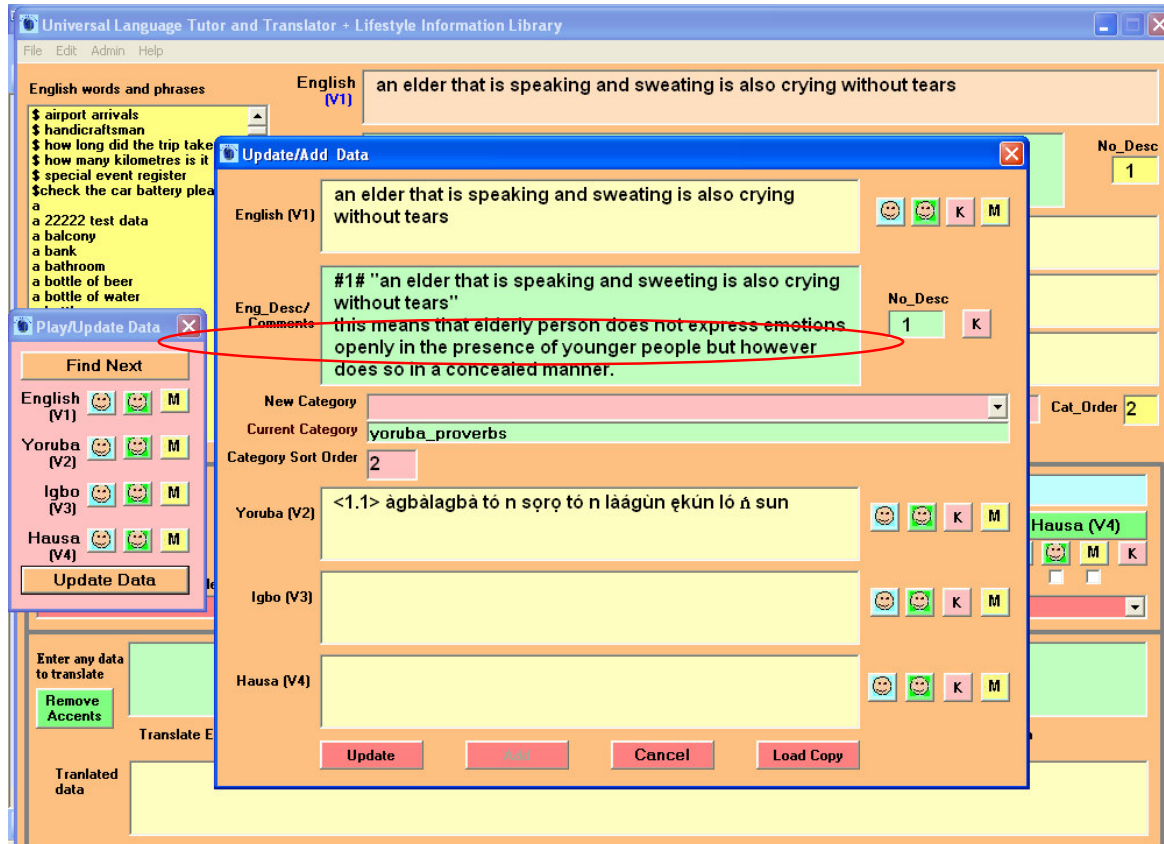
Yoruba [V2] <1.1> bí a bá sòkò soja ará ilé ẹni nibá   K M

Igbo [V3]   K M

Hausa [V4]   K M

Adding new line in the Eng_Desc/Comments field

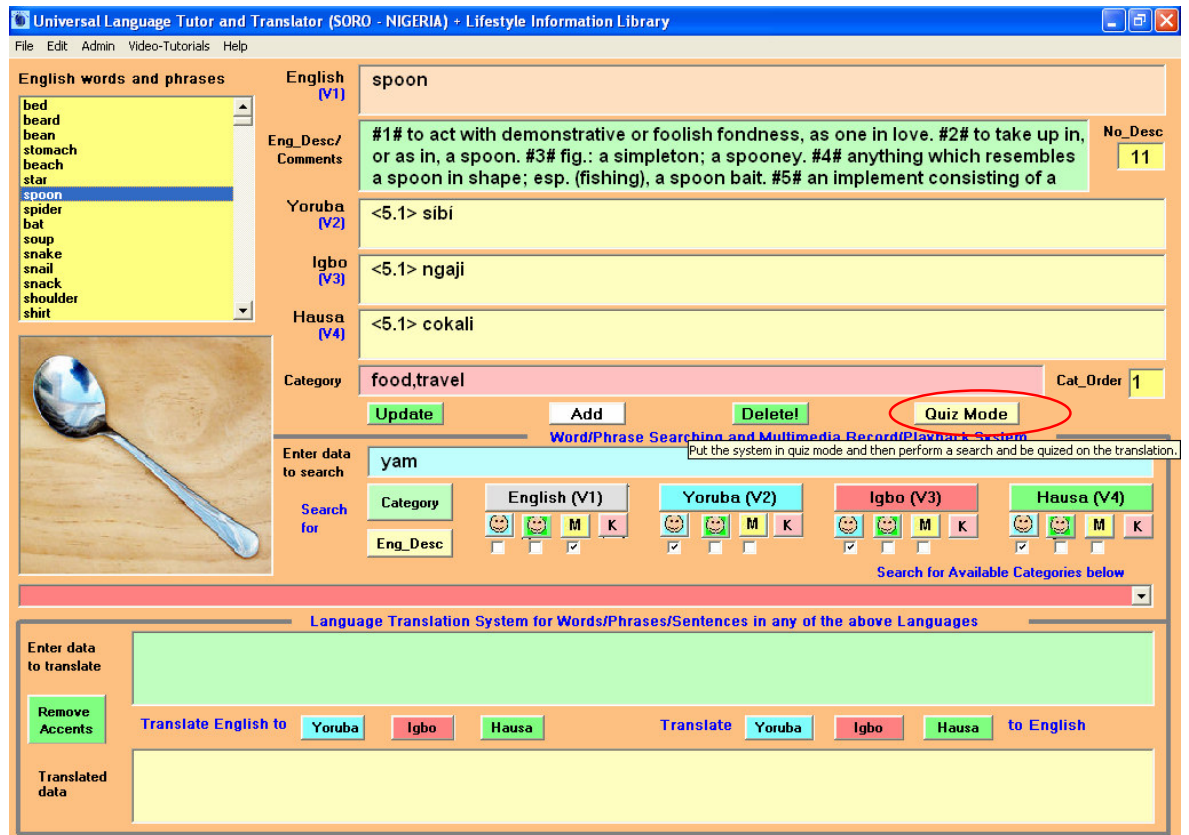
To add a new line to the Eng_Desc/Comments field use “Ctl + Enter” keys together while your cursor is located on the last line of data in this field.



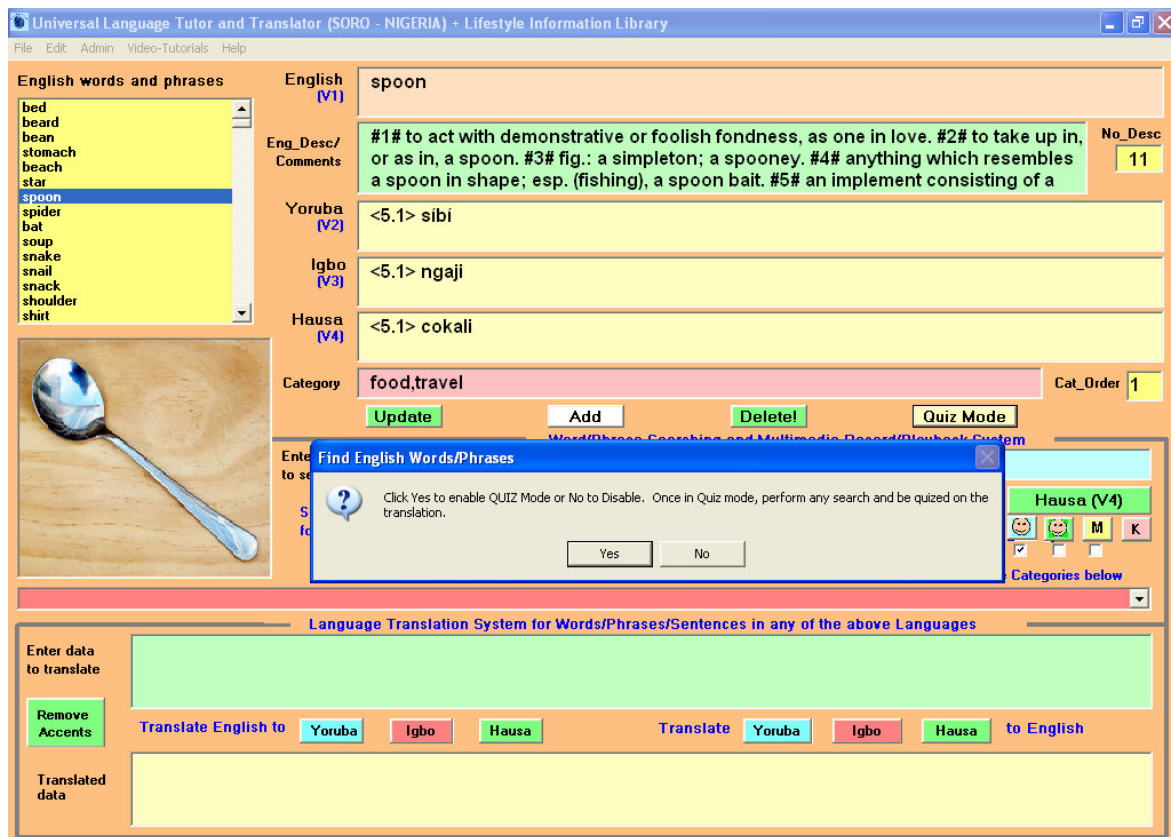
Chapter 9 Quiz Function

SORO Nigeria has a feature that allows the user to test their knowledge of the languages translated from English by using the quiz function.

The quiz function is activated by selecting the “Quiz Mode” button shown below:



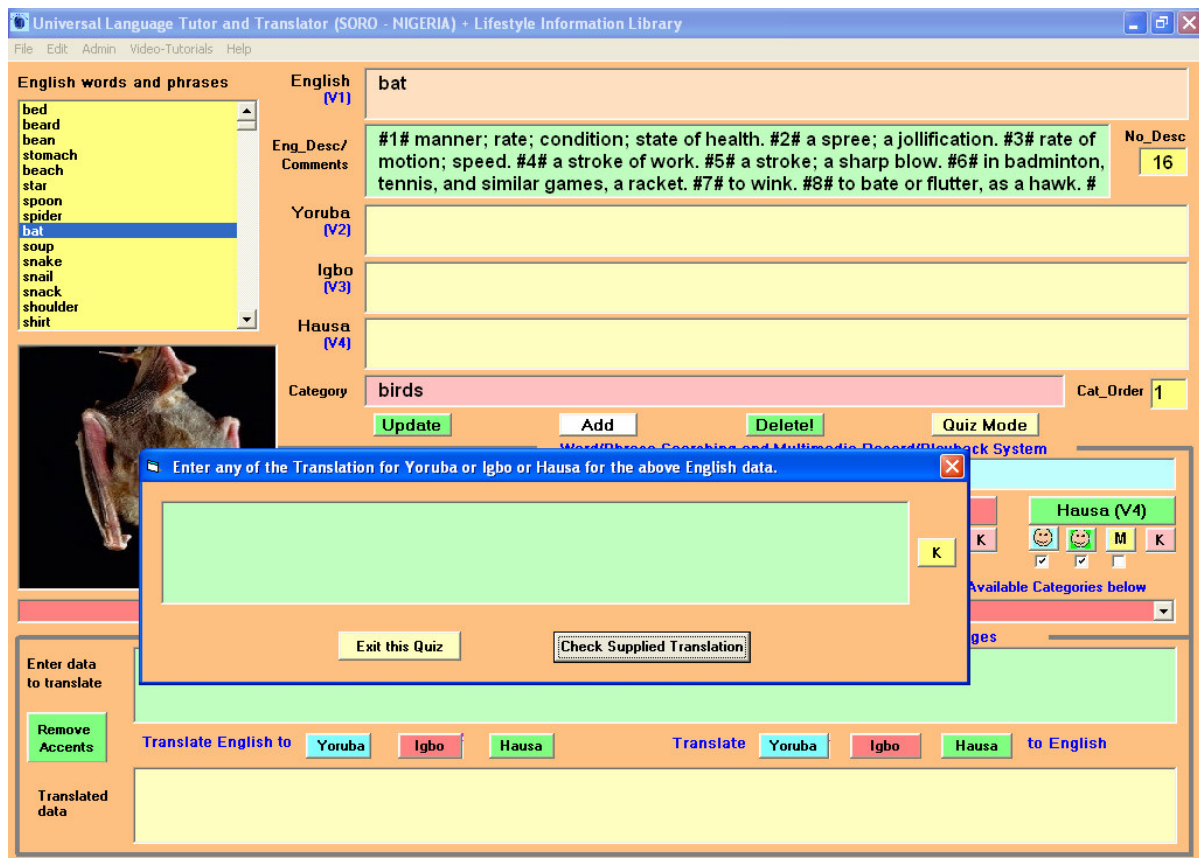
Once selected, a prompt is displayed asking the user to enable or disable the quiz mode as shown below:



Select “Yes” to put the system in quiz mode; then perform a search for English, Yoruba, Igbo or Hausa words/phrases. The user will be prompted to write the translated data exactly as it was written in SORO Nigeria (Note: system checks for accented characters as well), if the user enters a wrong translation, the system tells the user that the entry is wrong and prompts the user to try again.

If the user enters the correct translation, the system congratulates the user and allows the user to continue with other quiz questions. *The quiz function is best utilised when using the category search function*, because it allows the user to practice the quiz on all related data in the category selected. For example if the animal category is selected, it will allow the user to confirm their understanding of animal names in other languages). This is a useful tool for students preparing for examination and also for teachers to test the knowledge of their students.

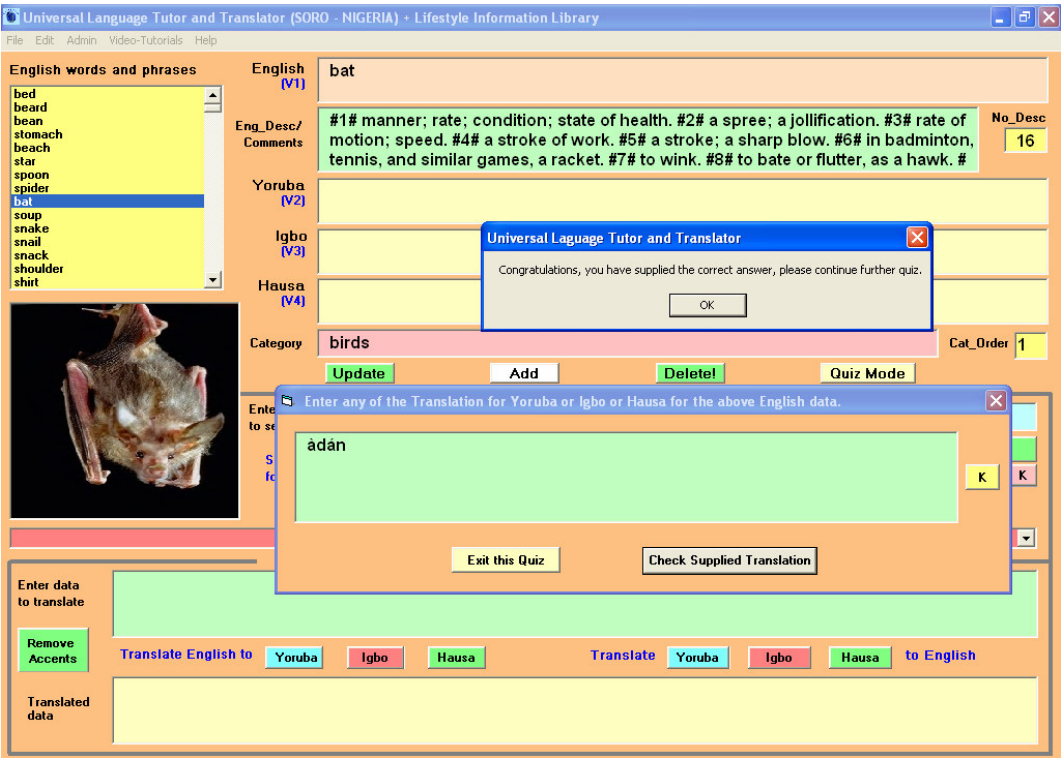
The screen dump shown below illustrates how the quiz function works: when an English word/phrase is selected, the system blanks out all the translations for Igbo, Hausa and Yoruba and ask the user to enter the translation that matches any or all of the three Nigerian languages.



The above quiz is displayed when the English word “bat” is selected. The user has to enter the translation in any of the three languages’ and then select the “Check Supplied Translation” button to confirm the answer.

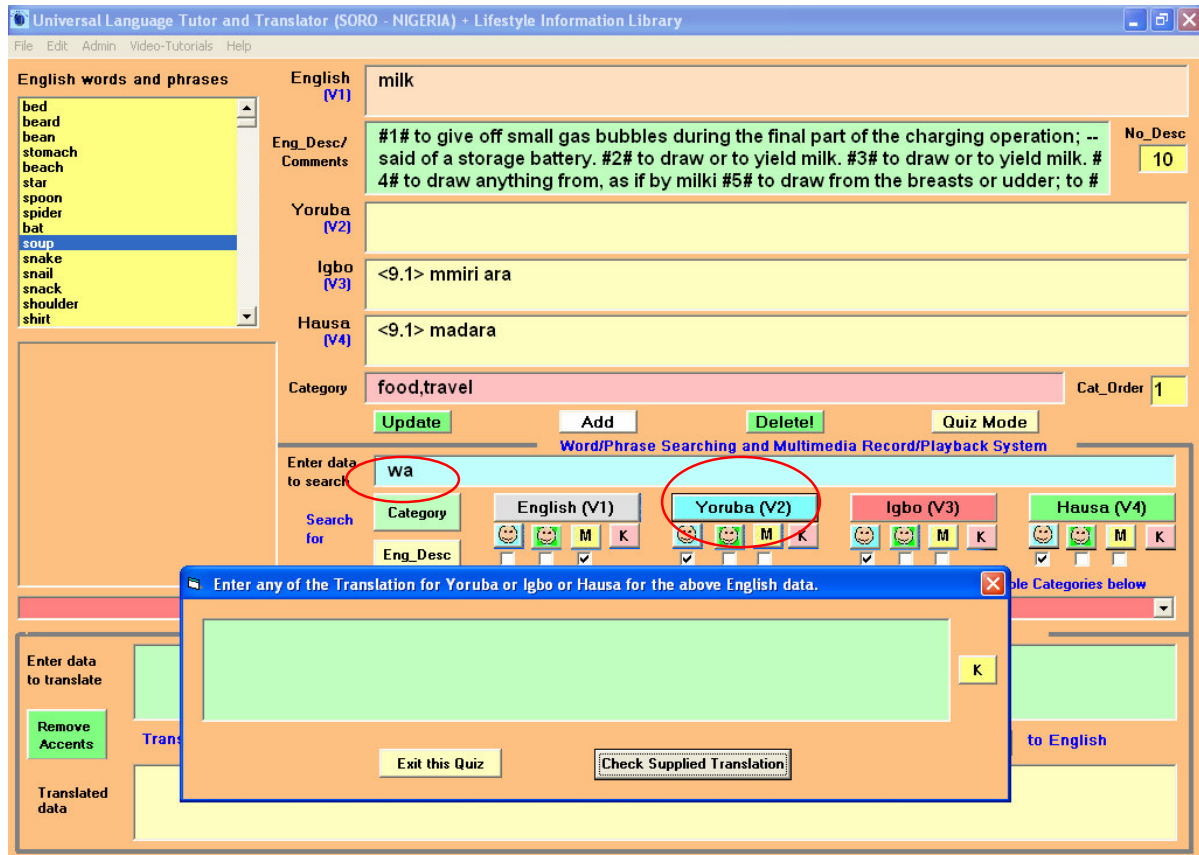
If the user enters a wrong translation, the system tells the user that the entered translation is wrong and gives the user option to try again as shown below:

Selecting the “Check Supplied Translation” button gives a congratulatory message as shown below for correct translation.

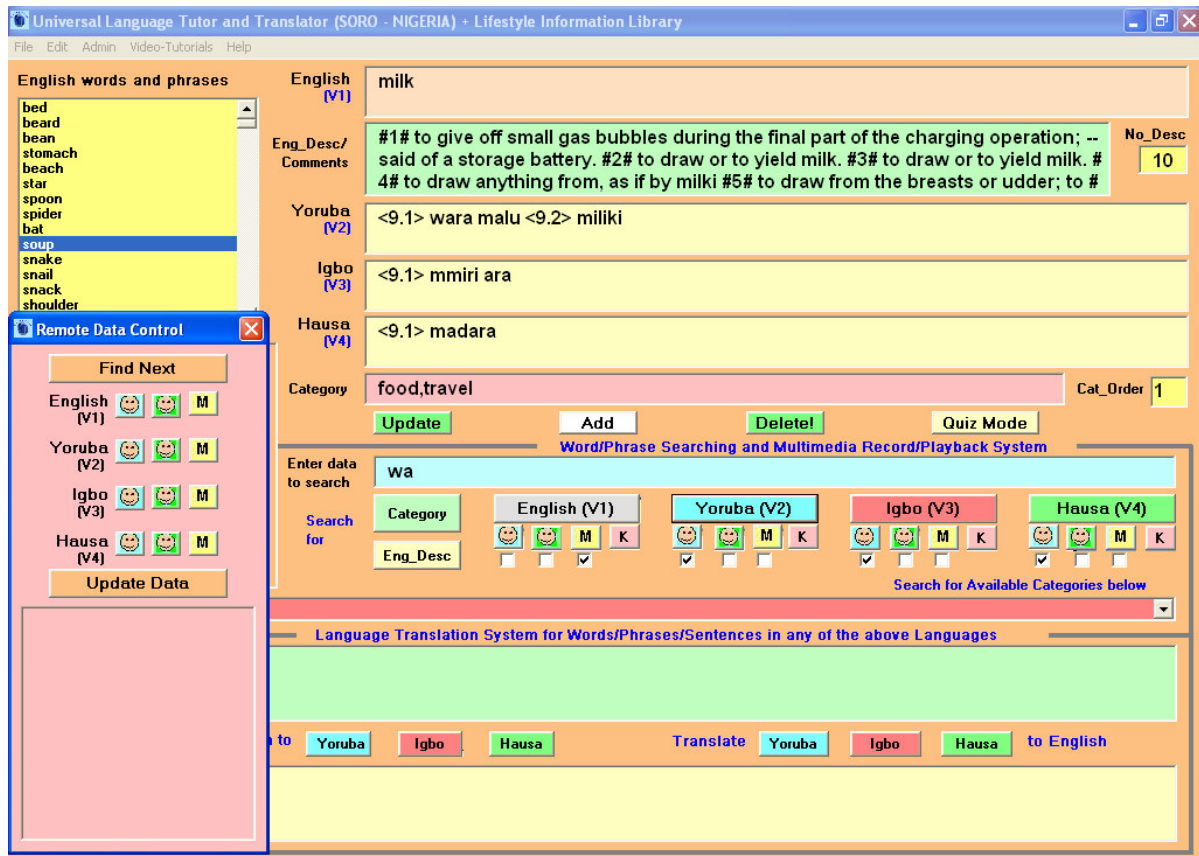


When the congratulation message is selected, the system displays the blanked out translation as shown below:

Alternate Quiz Method: if the quiz is to test the understanding of Yoruba or Igbo or Hausa language then the user has to supply the answer in the blanked out language as shown below. This blanked out language is the language that is being searched for e.g. this method allows user to search for Yoruba words/phrases that contains “wa” and then complete a quiz on the use of this word in Yoruba as illustrated in the screen dump below:



You can see that only the Yoruba language is blanked out requiring the user to supply the translated data in Yoruba language to pass the quiz or use the “Exit this quiz” button to exit the quiz after which the answer is displayed as shown below.



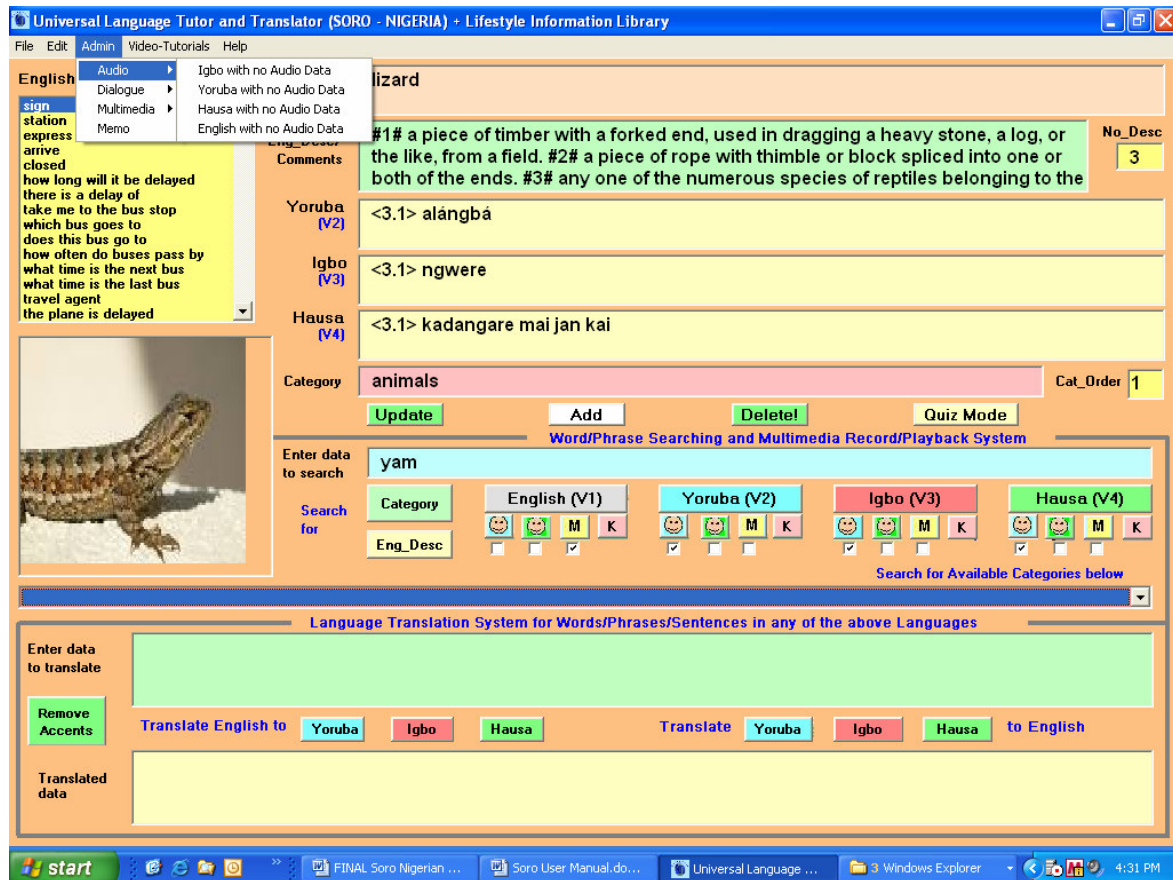
Select the “Quiz Mode” again and select “No” to turn off the quiz mode.

Chapter 10

Menu Functions

Admin Options

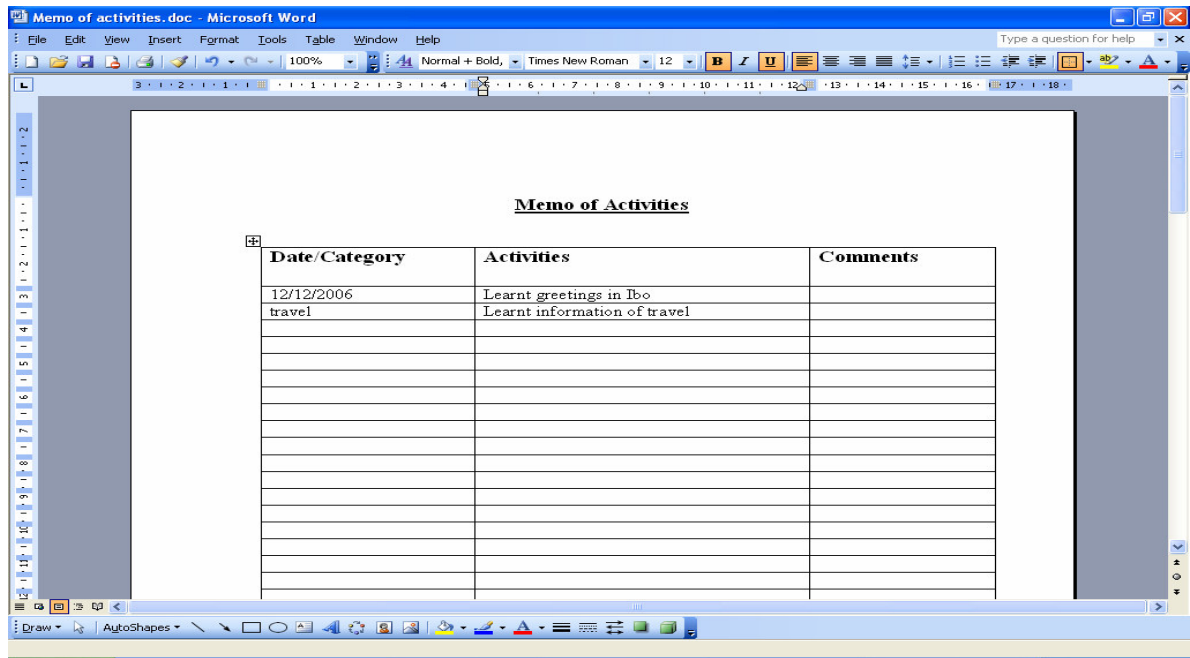
The menu function illustrates all the other features that are available within the software:



The above menu will allow you to update all Igbo, Yoruba, Hausa or English data with audio file is one is not currently assigned or created. Similarly you can create same information for Dialogue audio data and Multimedia electronic files.

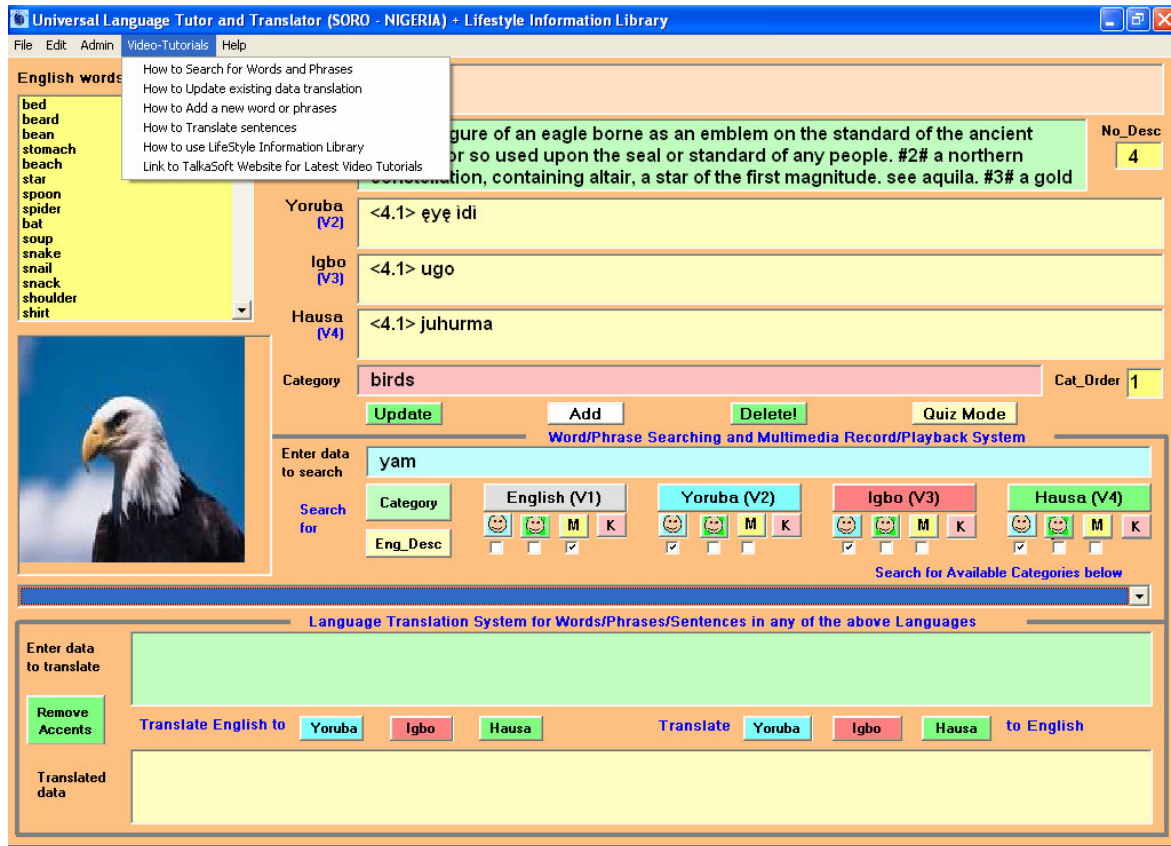
Finally you can select the “Memo” option to record your learning progress in the memo book as shown below:

:

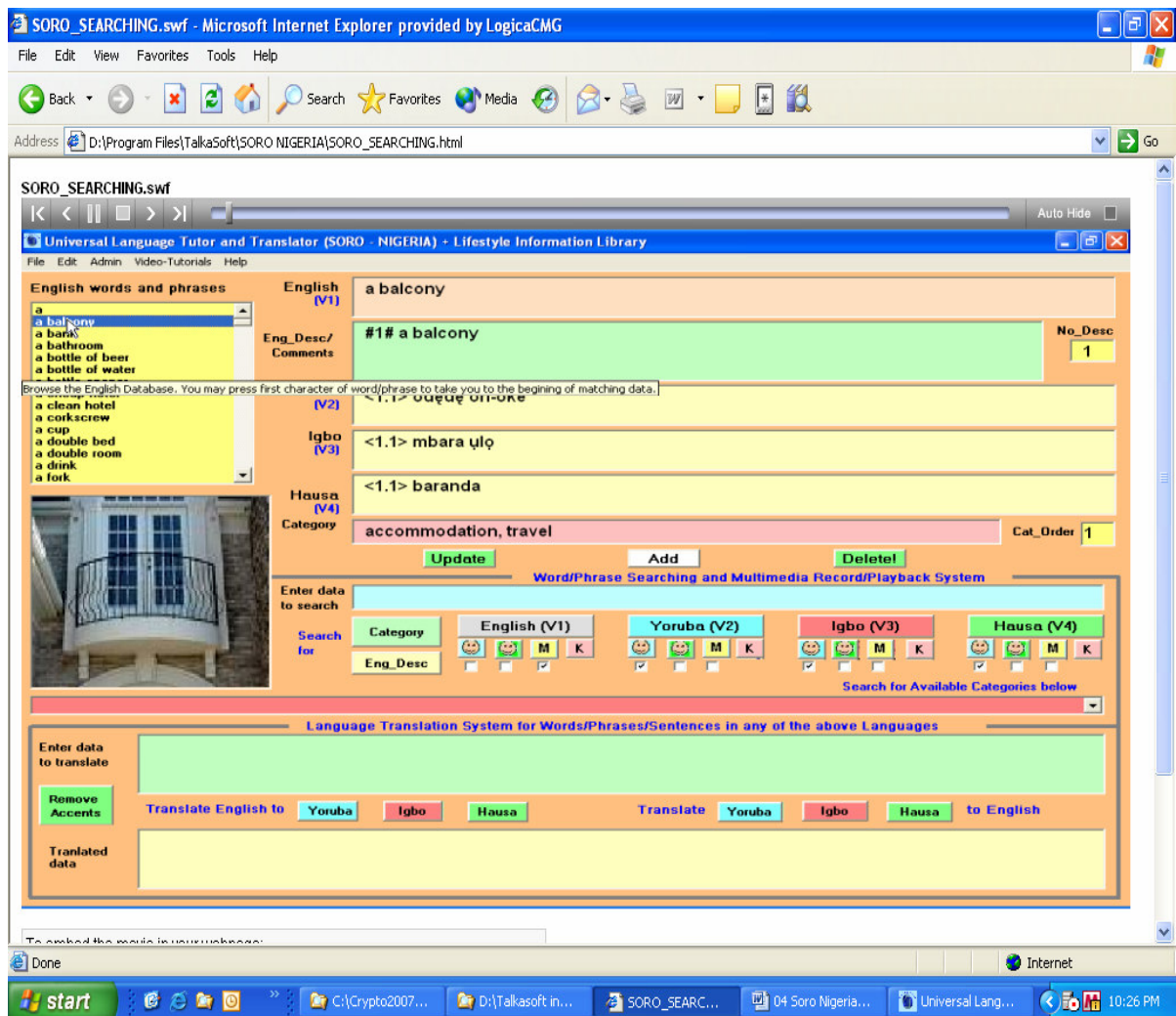


Self Train using Video Tutorial

The “Video Tutorial” menu can be used for self tutoring on the features of SORO Nigeria. Audio/visual training information will be displayed for the options listed below:



When the searching video is selected the following information is displayed using internet explorer with the auto play mode. This means that the system will start to play the training video:



You can pause or stop the training video as shown above. Use the File-Exit menu above to exit the training information.

Chapter 11 Translating English to Other Languages

Though the database meaning of each word/phrases are illustrated in the display section of SORO, however, SORO has another special feature which allows users to translate English sentence(s) to Yoruba, Igbo or Hausa by entering the sentence into the translation field as shown below. The accuracy of this translation will depends on the availability of equivalent data in the database. When there is no translation in the database for a particular word in the sentence it simply returns the original word prefixed with ** e.g. **Gbenga.

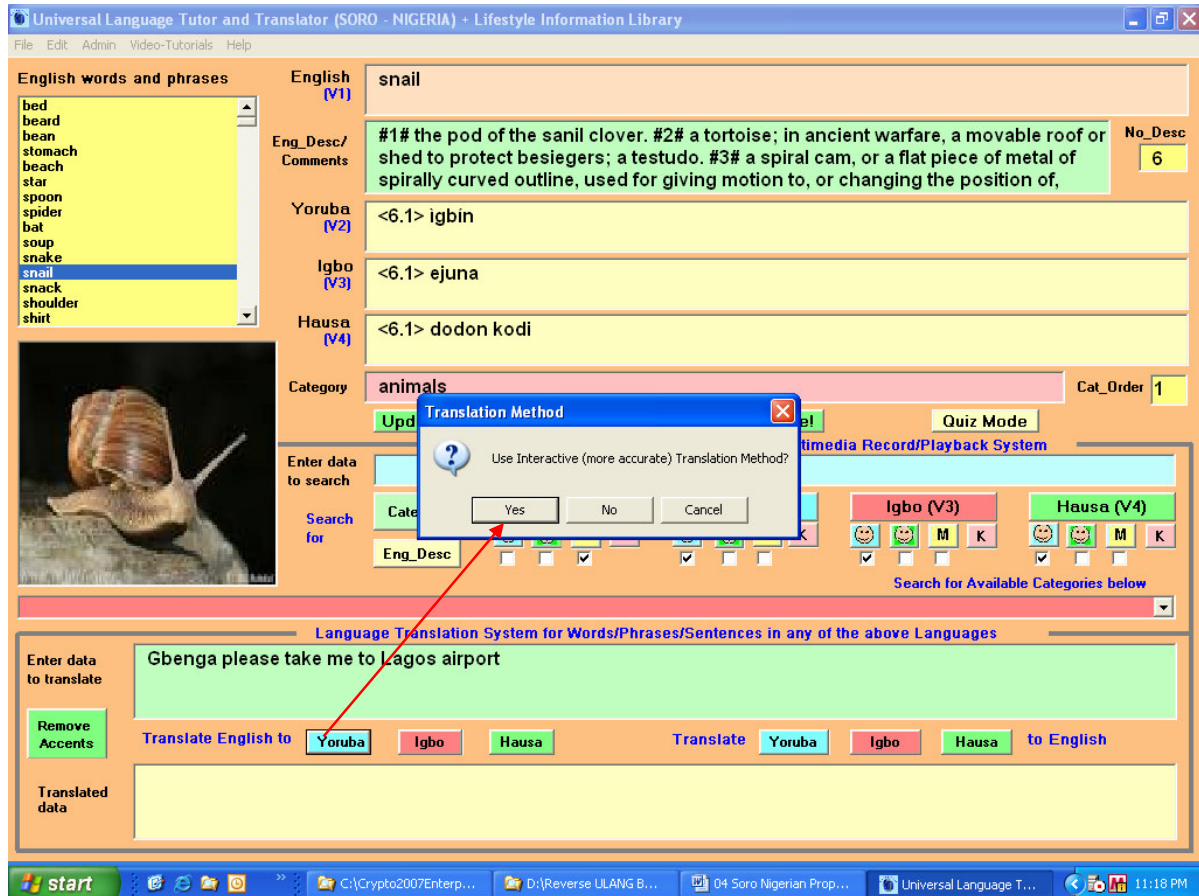
Also if the data does not exist in the database e.g. people's names, it simply returns same data in the translated data field but prefixed with * e.g. *England indicates name of a place or information not translated or available in database. Such translations are however displayed as “not found” if translation was performed in interactive mode.

The screenshot displays the 'Universal Language Tutor and Translator (SORO - NIGERIA) + Lifestyle Information Library' window. The interface is divided into several sections. On the left, there is a list of 'English words and phrases' including 'rat', 'ram', 'rainy', 'rain', 'railway', 'rabbit', 'pork', 'pony', 'policeman', 'police', 'plug', 'plate', 'plantain', 'pineapple', and 'pillow'. Below this list is a small image of a plantain. The main area shows the translation of the word 'plantain'. It includes the English description: '#1# any plant of the genus plantago, but especially the p. major, a low herb with broad spreading radical leaves, and slender spikes of minute flowers. it is a native of europe, but now found near the abode of civilized man in nearly all'. Below this, the translations are provided for Yoruba (V2), Igbo (V3), and Hausa (V4). The Yoruba translation is '<1.1> ọgẹdẹ àgbagbà', Igbo is '<1.1> abirika ọka', and Hausa is '<1.1> agade <1.2> katon ayaba'. The category is 'food,travel' and the Cat_Order is '1'. There are buttons for 'Update', 'Add', 'Delete!', and 'Quiz Mode'. Below these, there is a section for 'Enter data to search' and 'Word/Phrase Searching and Multimedia Record/Playback System'. At the bottom, there is a section for 'Language Translation System for Words/Phrases/Sentences in any of the above Languages'. This section has a text input field with the sentence 'gbenga please take me to lagos airport'. Below the input field, there are buttons for 'Remove Accents' and 'Translated data'. The 'Translated data' field shows the Yoruba translation: '*gbenga ẹ jòwọ ẹwá gbémi lọ sí ibùdó ìwọkọ òfurufú ní èkó'. The 'Yoruba' button is circled in red.

The above indicates the translation of an English sentence “Gbenga please take me to Lagos airport” to a Yoruba meaning of “**gbenga ẹ jòwọ ẹwá gbémi lọ sí ibùdó ìwọkọ òfurufú ní èkó”.

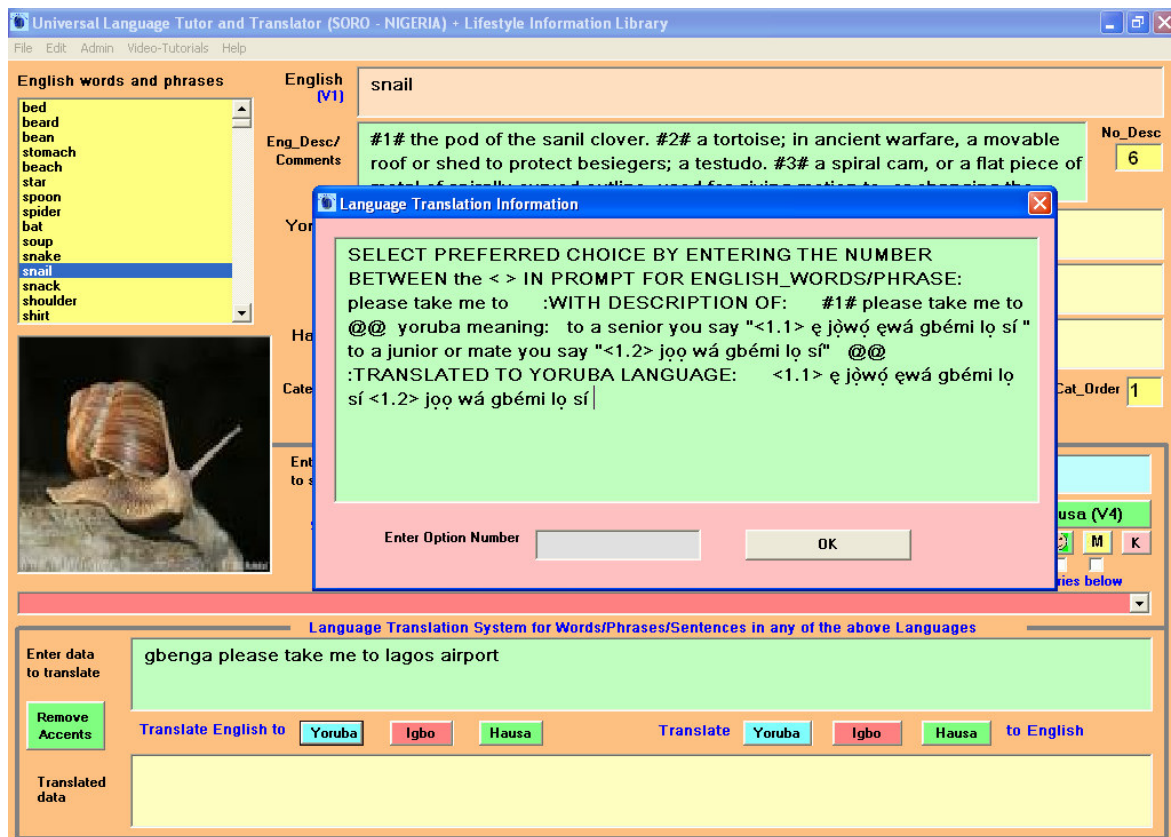
Note that you can use the Translation system separately to the search and display unit above it.

The translation of the above example can be performed in a non-interactive translation; the option for interactive or non-interactive mode can be selected as illustrated below:

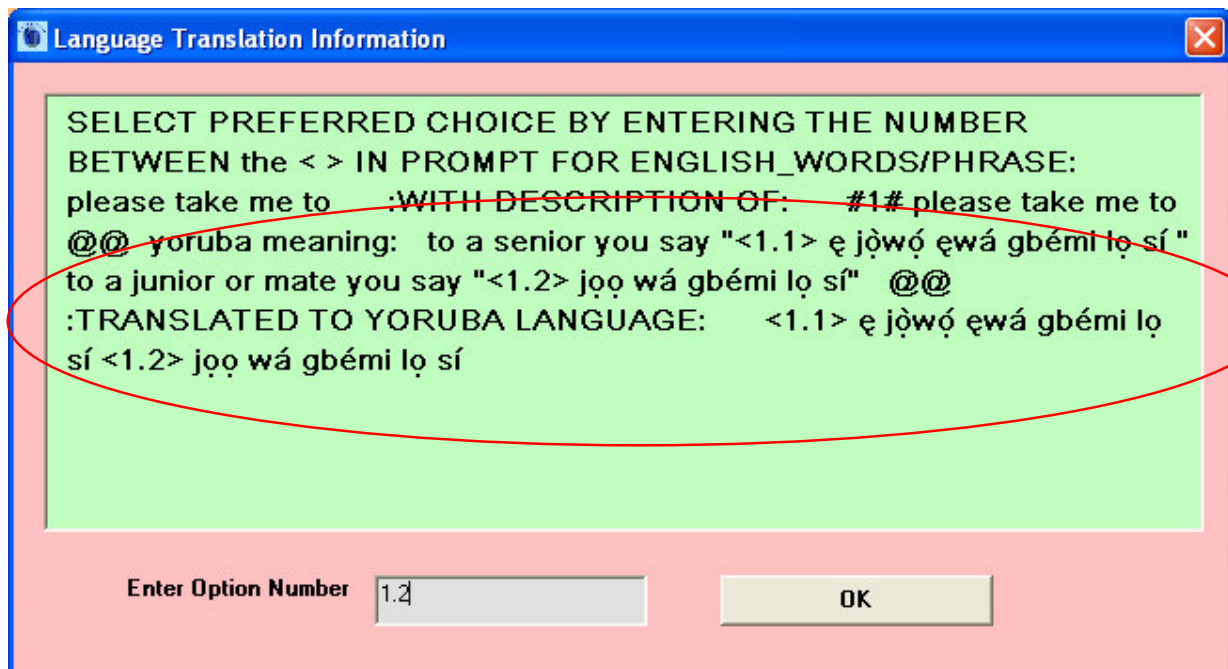


The “Translate English to” “**Yoruba**” button is selected as shown above. The “Use Interactive Translation Method” options if selected i.e. with “Yes” option will lead the user to the interactive mode while the “No” will simply use an algorithm to display the best translation.

In the interactive mode the following screen dumps illustrates what the user will see in order of display:



See detail of the interactive screen below:

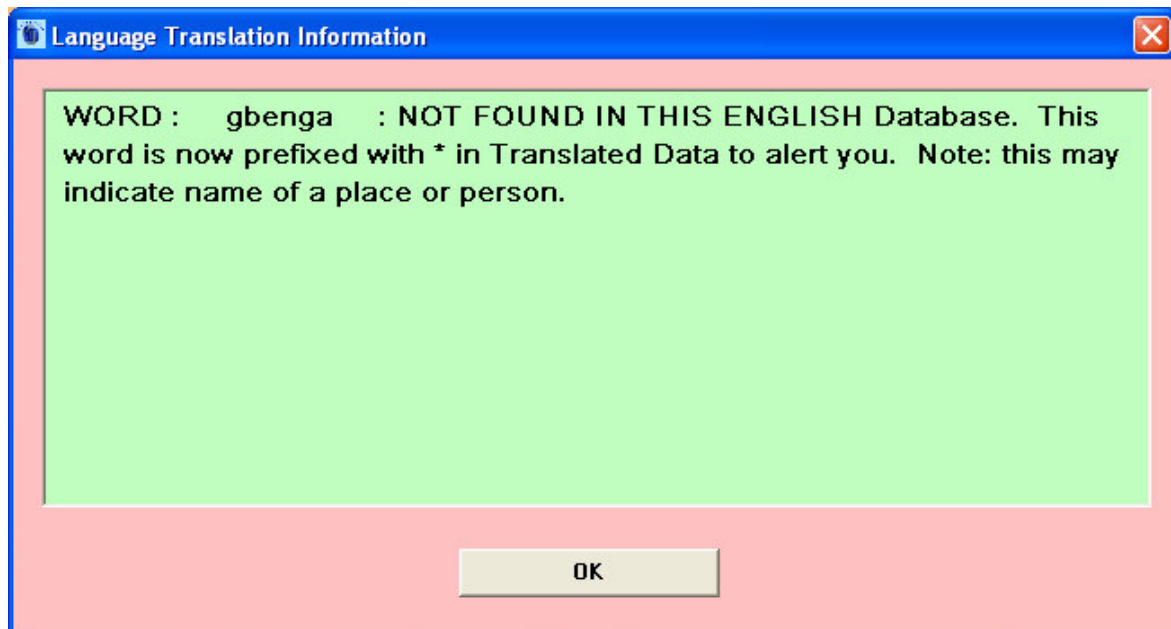


Note: that the above translation can easily be processed in context of the English sentence by typing 1.1 in the “Enter Option Number” field to imply “**ẹ jowọ ẹwá gbémi lẹ sí**” or 1.2 to imply “**jọọ wá gbémi lẹ sí**”. In this instance we key in 1.2 to make a difference when compared to non interactive translation shown earlier.

The other interactive information is displayed below:

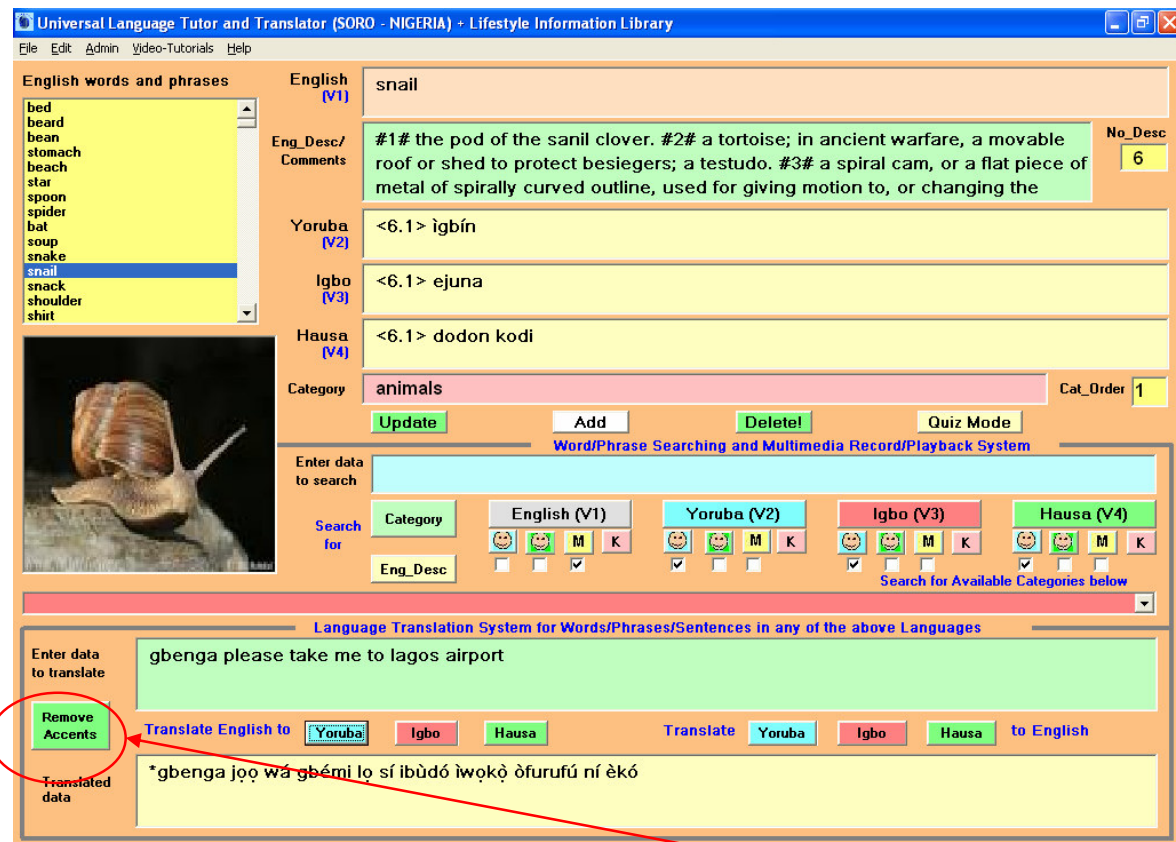


Select OK to accept the above information.



Above information indicates no translation for “Gbenga”.

See the new translation if option “1.2” was selected in the Choice prompt. This is used when Gbenga is of same age or junior to the person speaking to Gbenga which means “**Gbenga please take me to Lagos airport**” now translates to “***gbenga jọọ wá gbémi lọ sí ibùdó iwọkọ òfurufú ní èkó**”

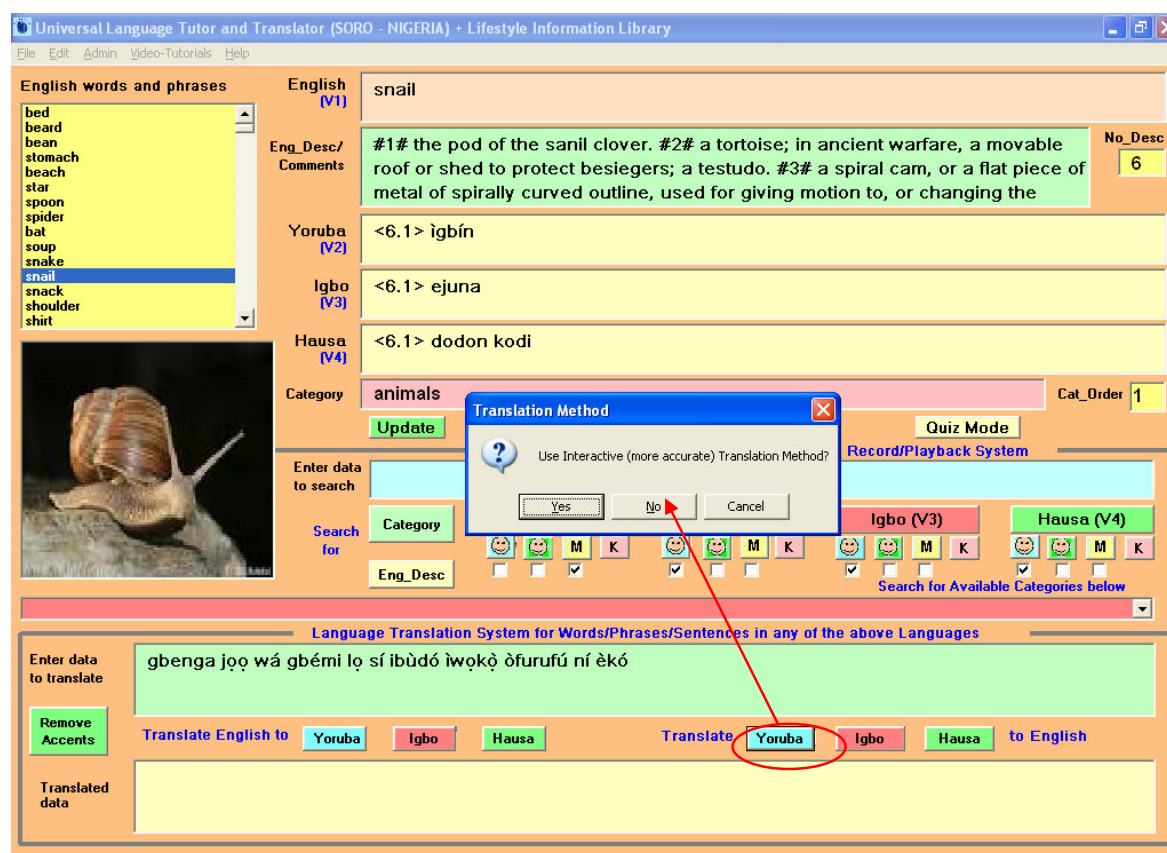


In cases where the accuracy is affected by wrong use of accented characters you can “Remove all Accents” and may get the same result, however more prompts may be observed when in interactive mode.

Chapter 12

Translating Sentences in Other Language to English

The reverse translation of the data “**gbenga jọọ wá gbémi lẹ sí ibùdó ìwọkọ òfurufú ní èkó**” can easily be performed by inserting the Yoruba data in the language translation field and then use the interactive “Yes” or non-interactive “No” mode as shown below:



Selecting “No” will return the English translation of “**gbenga please take me to lagos airport**” as shown below:

Universal Language Tutor and Translator (SORO - NIGERIA) + Lifestyle Information Library

File Edit Admin Video-Tutorials Help

English words and phrases

- bed
- beard
- bean
- stomach
- beach
- star
- spoon
- spider
- bat
- soup
- snake
- snail**
- snack
- shoulder
- shirt

English (V1)

snail

Eng_Desc/Comments

#1# the pod of the sanil clover. #2# a tortoise; in ancient warfare, a movable roof or shed to protect besiegers; a testudo. #3# a spiral cam, or a flat piece of metal of spirally curved outline, used for giving motion to, or changing the

No_Desc

6

Yoruba (V2)

<6.1> ìgbín

Igbo (V3)

<6.1> ejuna

Hausa (V4)

<6.1> dodon kodi

Category

animals

Cat_Order

1

Update Add Delete! Quiz Mode

Word/Phrase Searching and Multimedia Record/Playback System

Enter data to search

Search for

Category

English (V1)

Yoruba (V2)

Igbo (V3)

Hausa (V4)

Eng_Desc

Search for Available Categories below

Enter data to translate

gbenga jọọ wá gbémi lọ sí ibùdó ìwọkọ òfurufú ní èkó

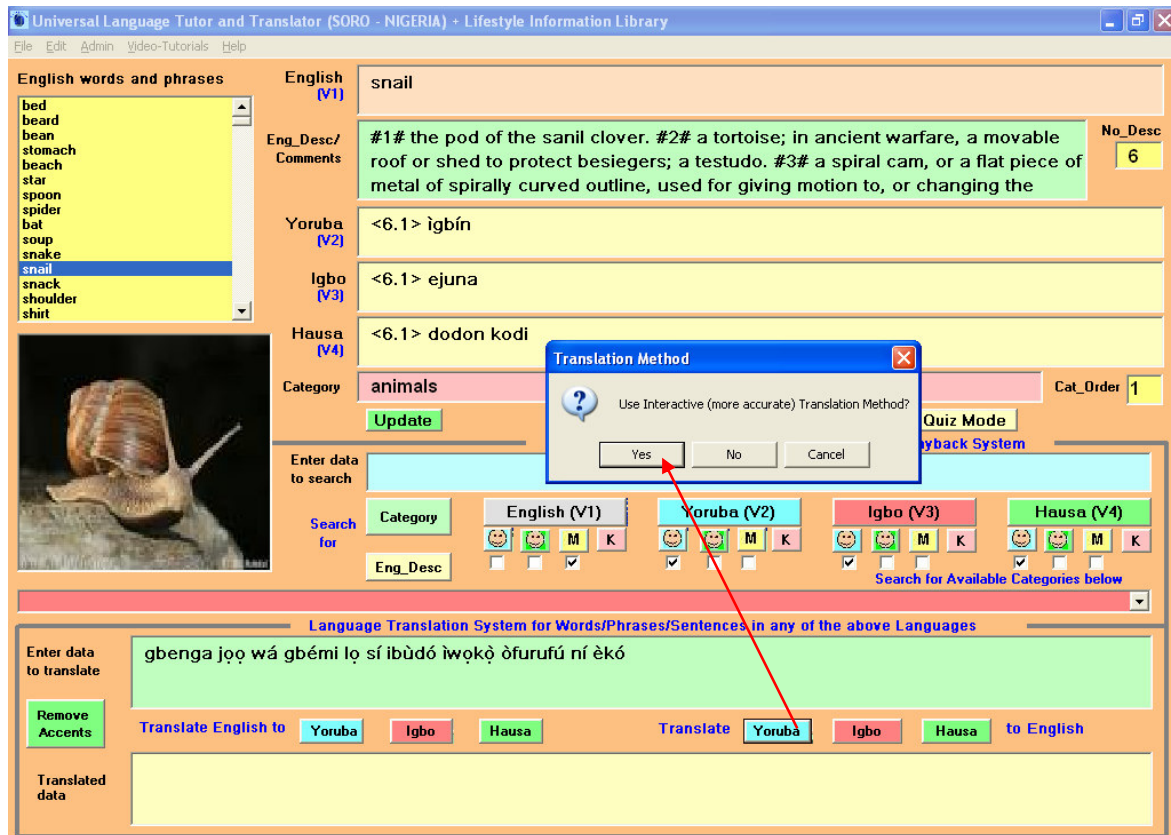
Remove Accents

Translated data

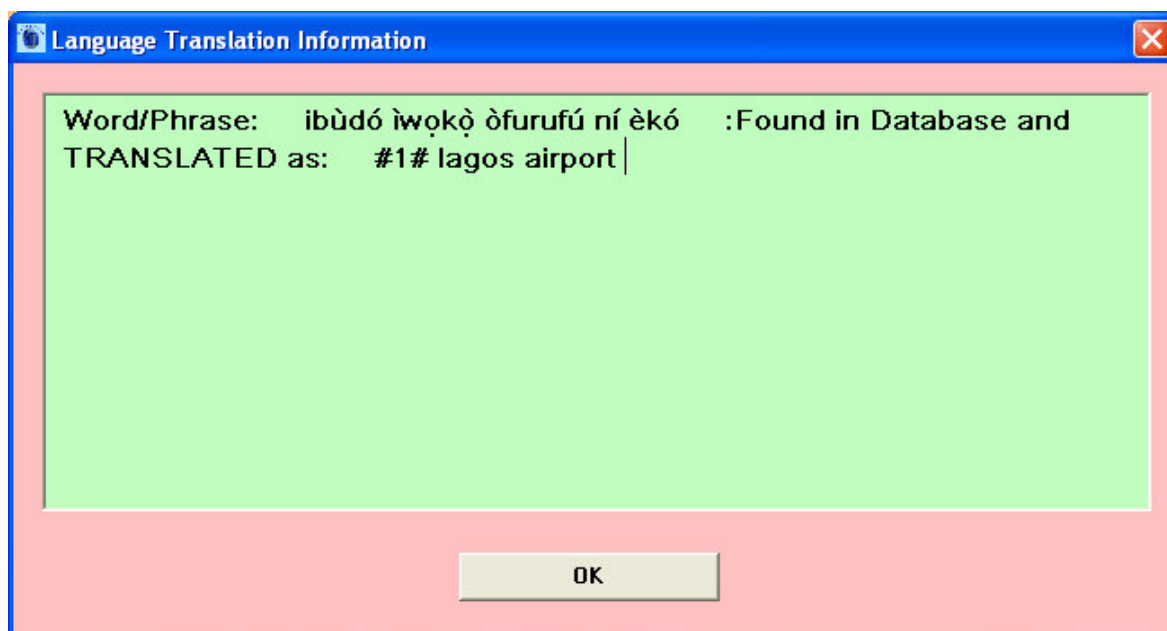
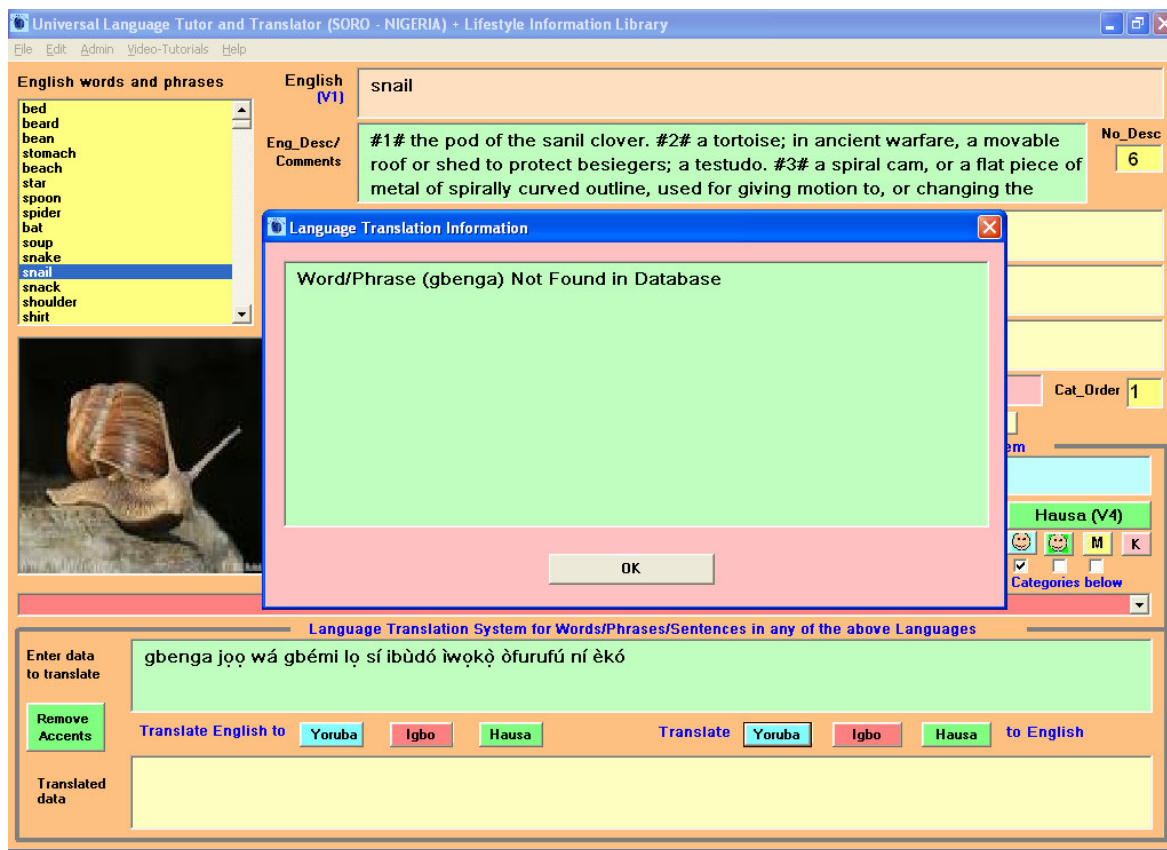
gbenga please take me to lagos airport

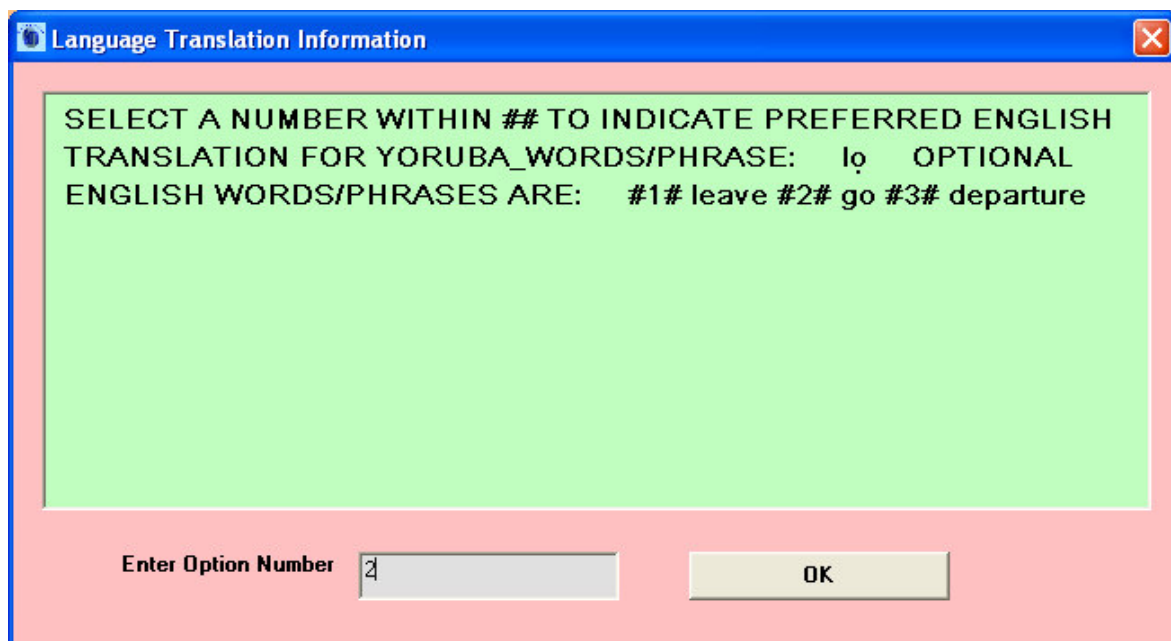
The Yoruba sentence is translated to “**gbenga please take me to lagos airport**” this is the same English sentence used in the English to Yoruba translation discussed earlier.

If the Translation was performed again and “Yes” was selected to allow interactive translation then the system will allow the user to translate the sentence in context and also display each word/phrase that was used in the translation, this way the user can learn in detail how the entire translation was performed, see screen dumps below:

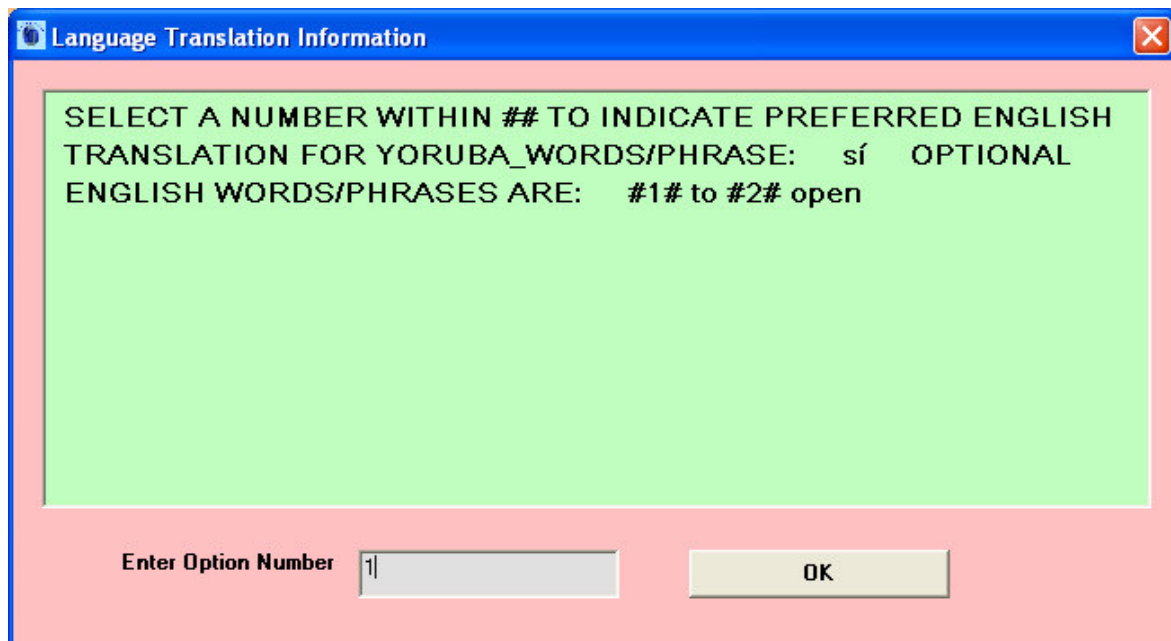


The screen dumps shown below illustrate the various information SORO Nigeria displays to translate the Yoruba words to English (or simply called “reverse translation”):

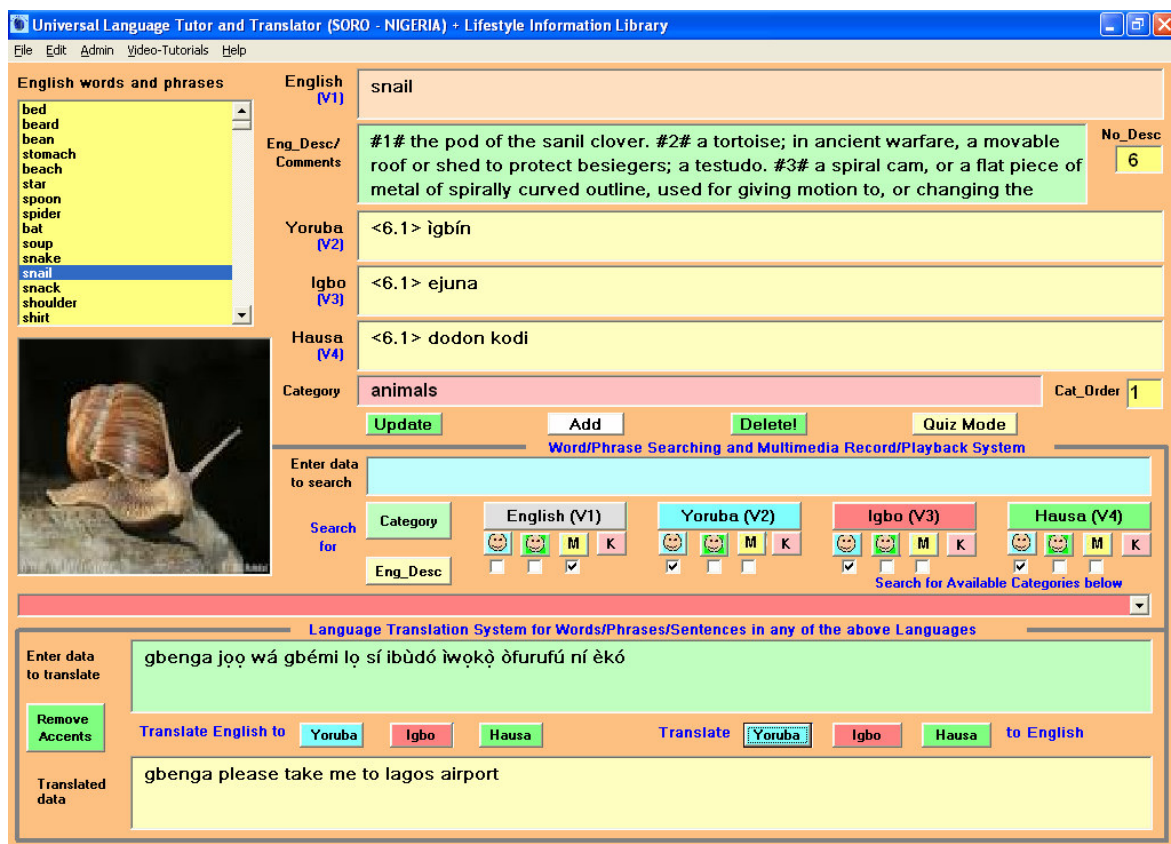




The above gives the user to select appropriate English word in context of the sentence being translated from Yoruba, here option 2 is selected. Also below option 1 is selected:



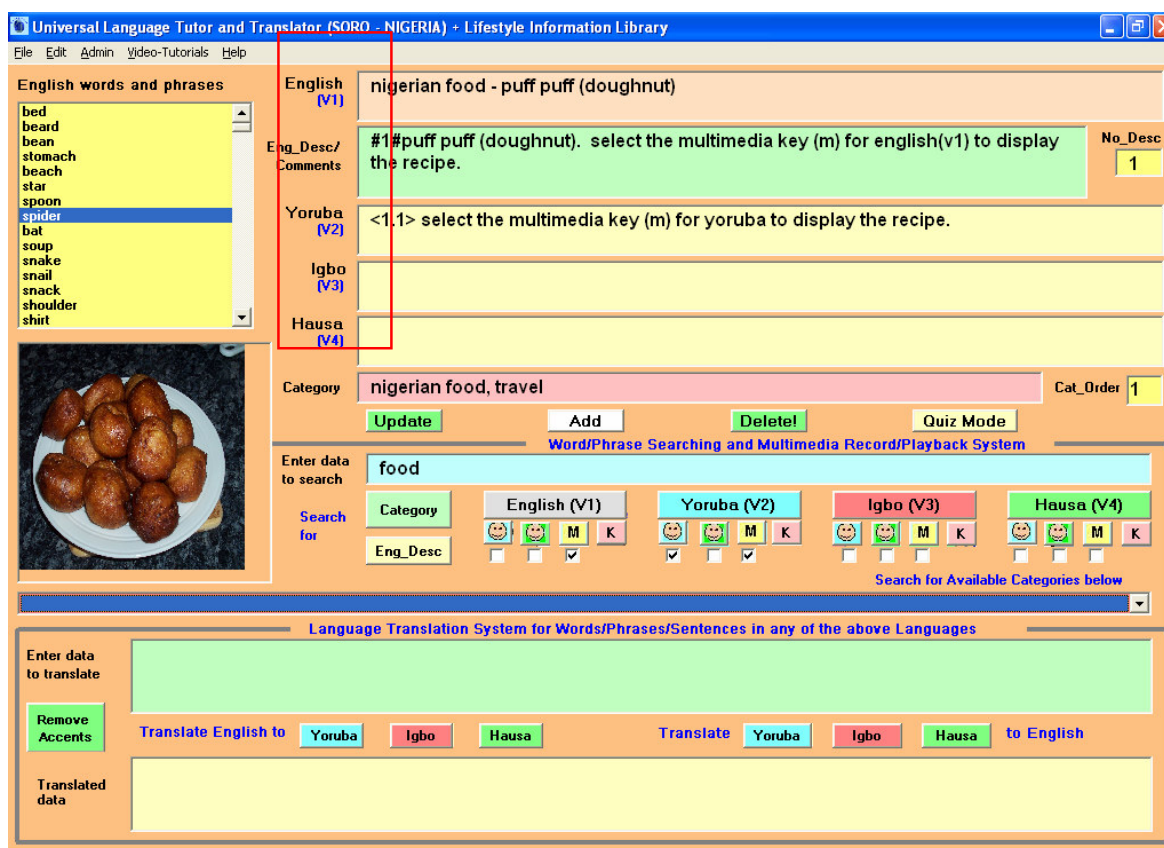
Finally the sentence was translated from Yoruba to English as shown below as “**gbenga please take me to lagos airport**”:



Chapter 13 Lifestyle Information Library

The lifestyle information library which is a component of SORO is similar to an electronic document management system. This allows the storage and retrieval of any electronic files into SORO. Images, pictures, video recordings and any other files can be stored.

When using the Information library all features of the Language system can be used. Most importantly the use of V1 to V4 (Versions 1 to 4) as shown below:

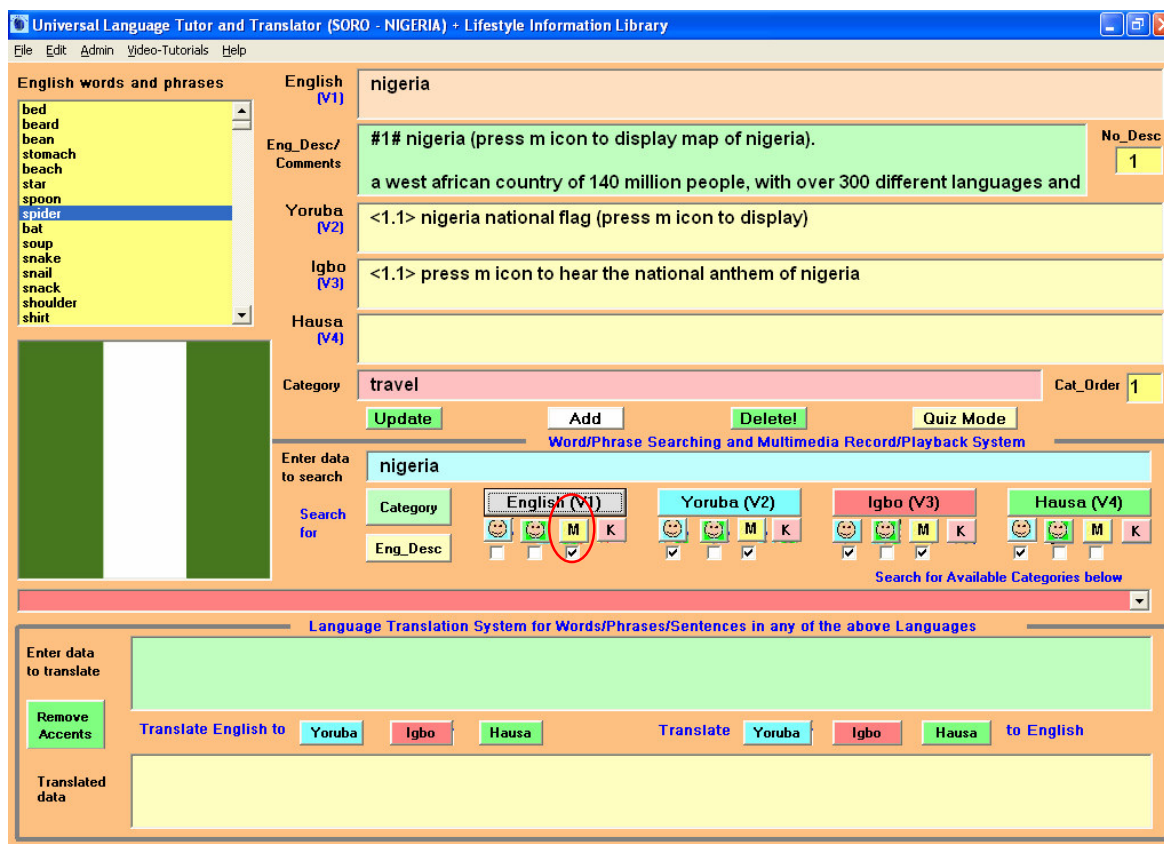


The Lifestyle system can be used to record the following activities:

- Family history and family tree (Genealogy)
- Special events e.g. Wedding, naming ceremony photographs or video recording
- Children Activities (including school, sporting, academic and other achievement photos and video)
- Food recipes
- General Information on the family's Country, City or town of origin
- Proverbs in Yoruba, Igbo, Hausa and other languages.
- Address book

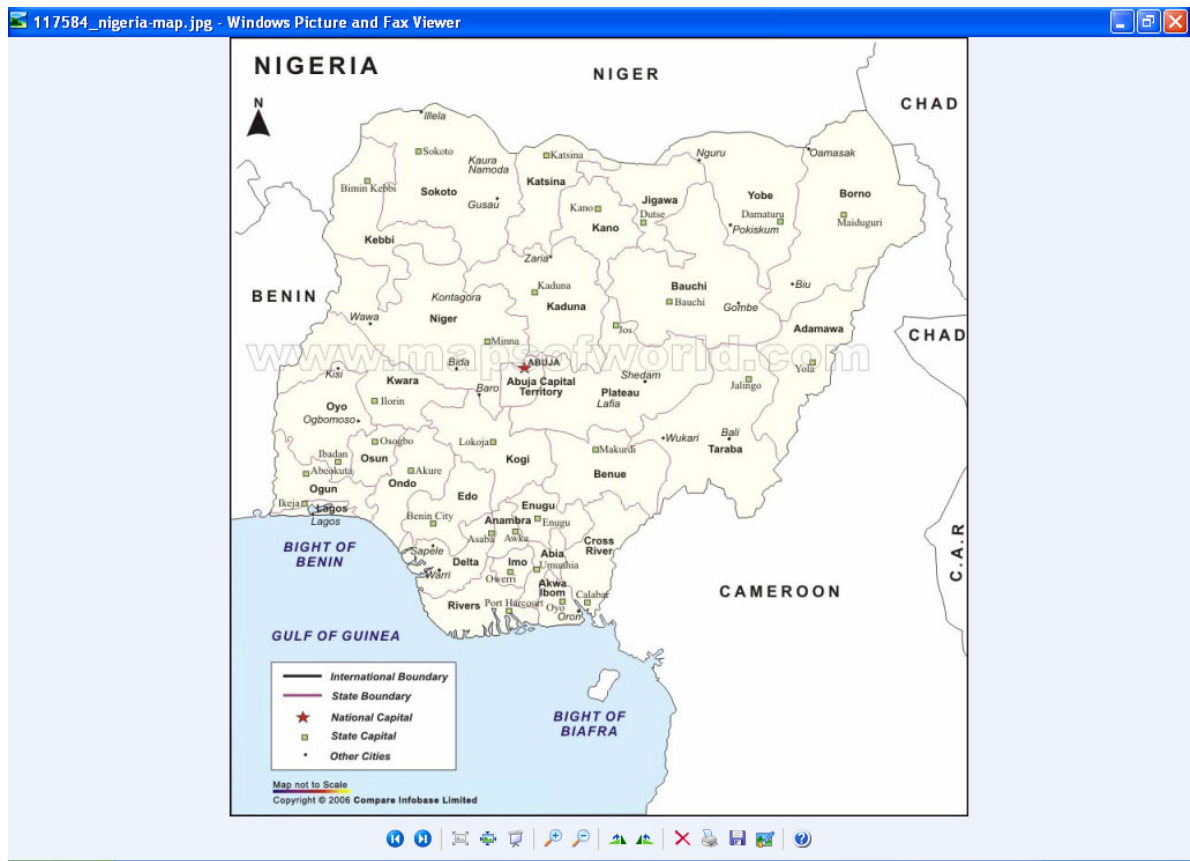
- Special events diary (e.g. birthdays/anniversaries)
- Nigerian Folklore and stories;
- Others similar lifestyle information.

Example below illustrates the information on Nigeria followed by a food recipe as stored on SORO.



A search on Nigeria is displayed as shown above. When the “M” key on English (V1) is pressed the national anthem is played using the Multi-Media player on your PC.

Also when the V3 for example was selected, the Nigerian map will be displayed as shown below:



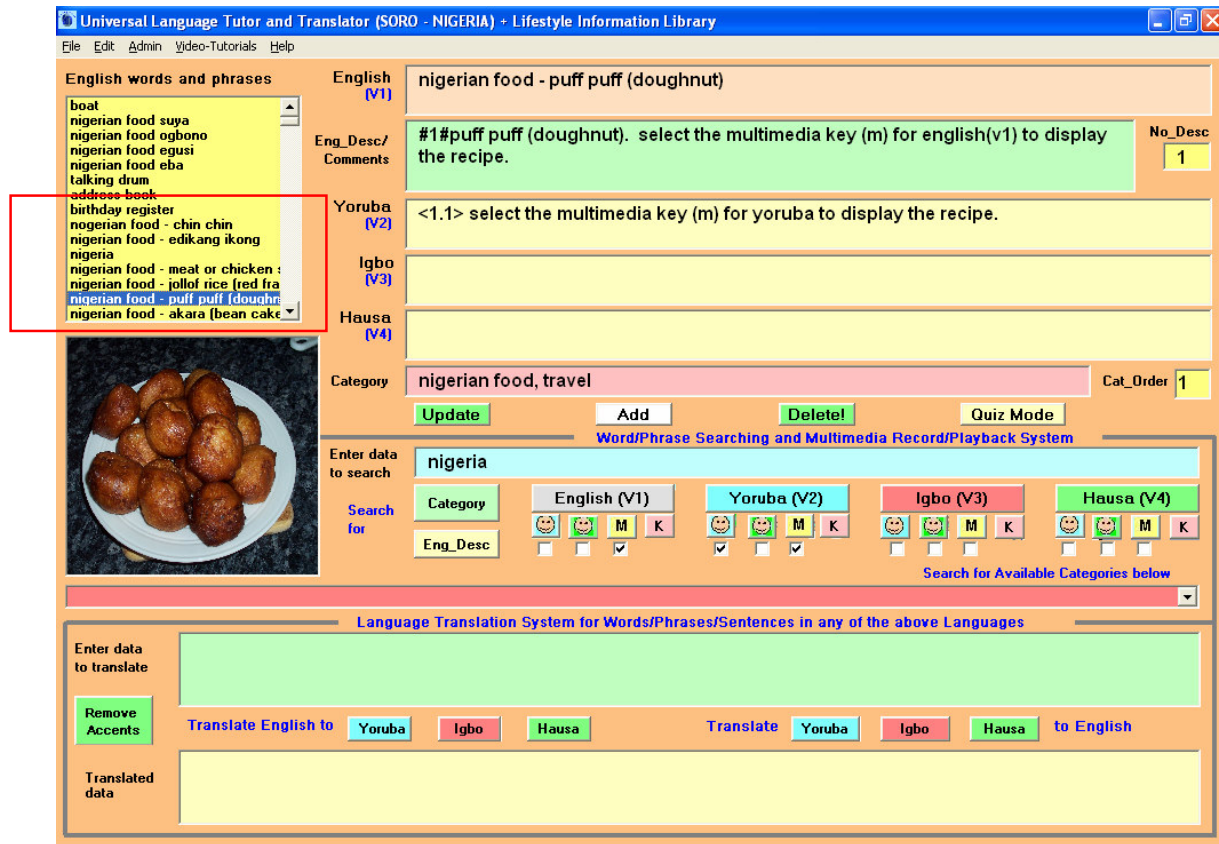
FOOD Recipe Example:

A category search on Nigerian food can be made as shown below:

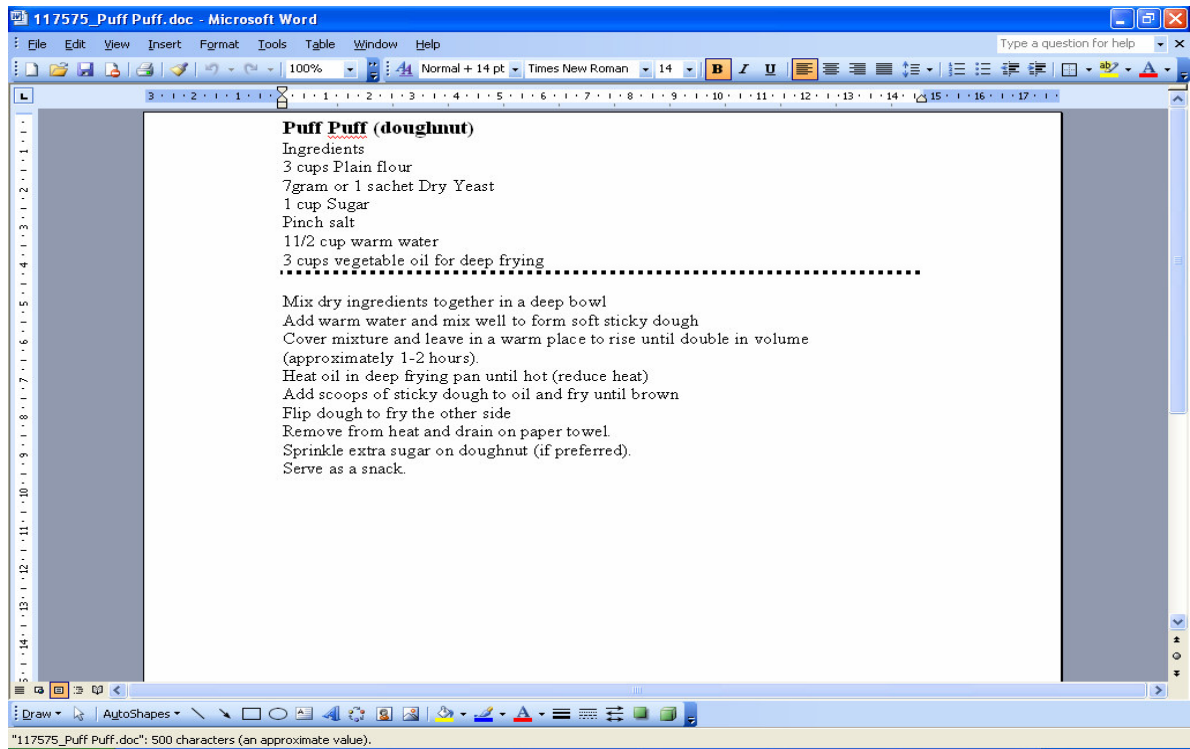
The screenshot displays the 'Universal Language Tutor and Translator (SORO - NIGERIA) + Lifestyle Information Library' window. The interface is divided into several sections:

- English words and phrases:** A list of words including bed, beard, bean, stomach, beach, star, spoon, spider, bat, soup, snake, snail, snack, shoulder, and shirt. The word 'spider' is highlighted.
- English (V1):** The word 'nigeria' is entered.
- Eng_Desc/Comments:** A green box contains the text: '#1# nigeria (press m icon to display map of nigeria). a west african country of 140 million people, with over 300 different languages and'. A 'No_Desc' field shows the value '1'.
- Yoruba (V2):** A yellow box contains the text: '<1.1> nigeria national flag (press m icon to display)'. A 'Cat_Order' field shows the value '1'.
- Igbo (V3):** A yellow box contains the text: '<1.1> press m icon to hear the national anthem of nigeria'.
- Hausa (V4):** A yellow box is currently empty.
- Category:** The word 'travel' is entered. Below it are buttons for 'Update', 'Add', 'Delete!', and 'Quiz Mode'.
- Word/Phrase Searching and Multimedia Record/Playback System:** This section includes a search bar with 'nigeria' entered. Below the search bar are four language tabs: 'English (V1)', 'Yoruba (V2)', 'Igbo (V3)', and 'Hausa (V4)'. Each tab has a 'Category' button and a 'Search for' button. Below these are checkboxes for 'Eng_Desc', 'M', and 'K' for each language. A 'Search for Available Categories below' link is also present.
- Translated data:** A large yellow box at the bottom is currently empty.

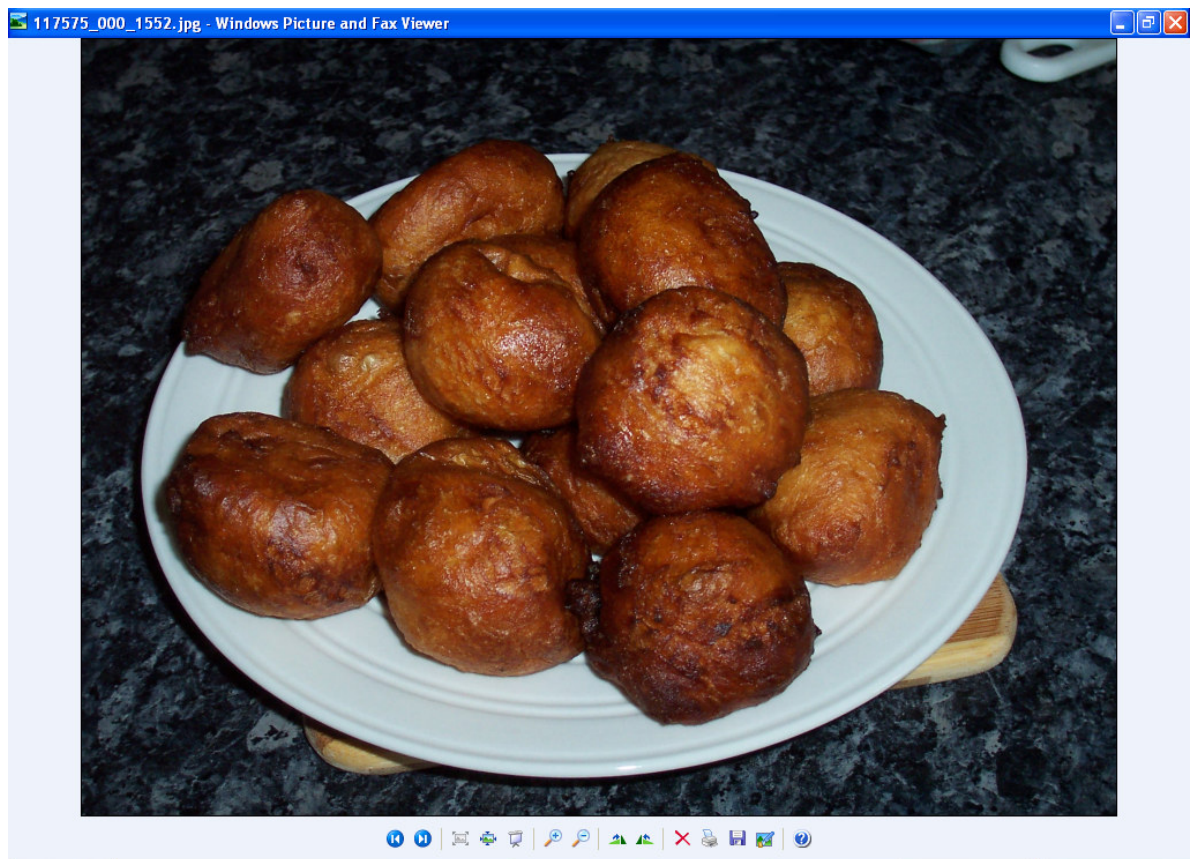
Similarly, you can navigate to the same data by using the visual search as shown below:



When (V1) “M” key is selected the recipe will be displayed as shown below:



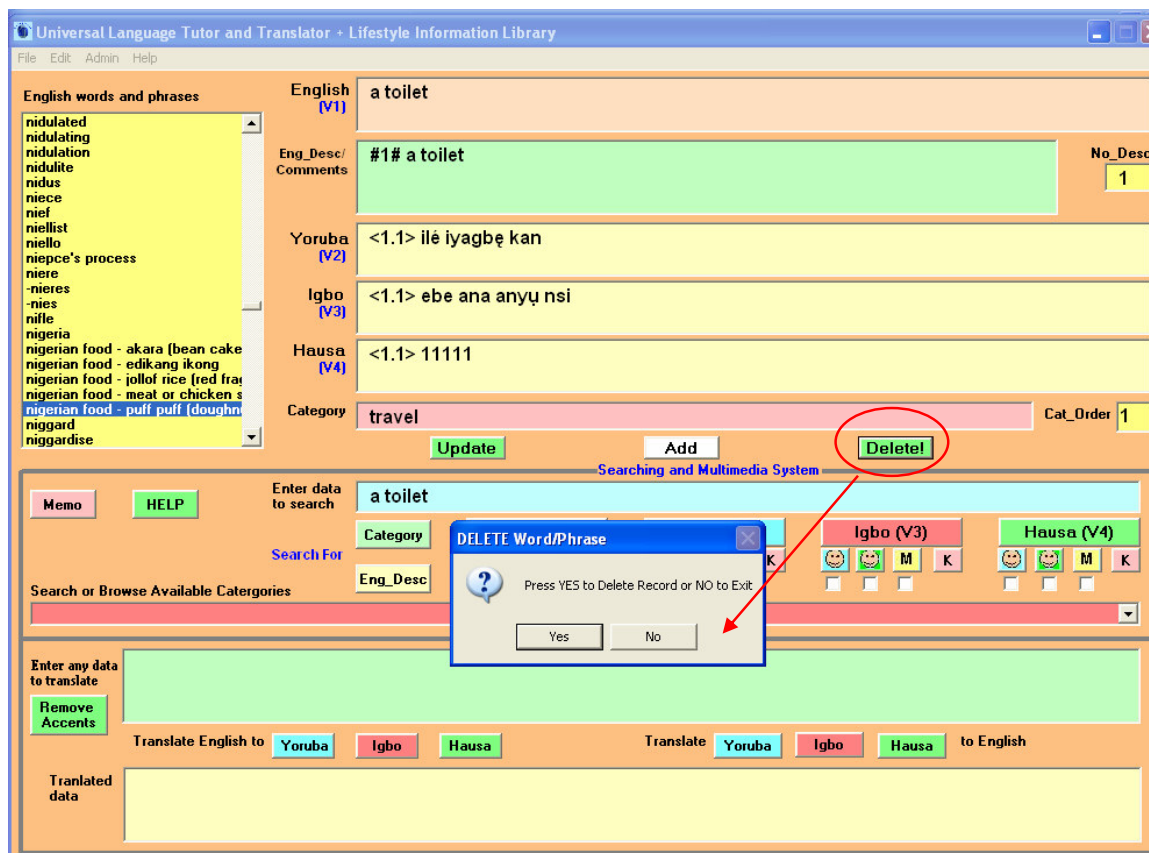
When M key for (V2) is selected, the picture of the food will be displayed as shown below:

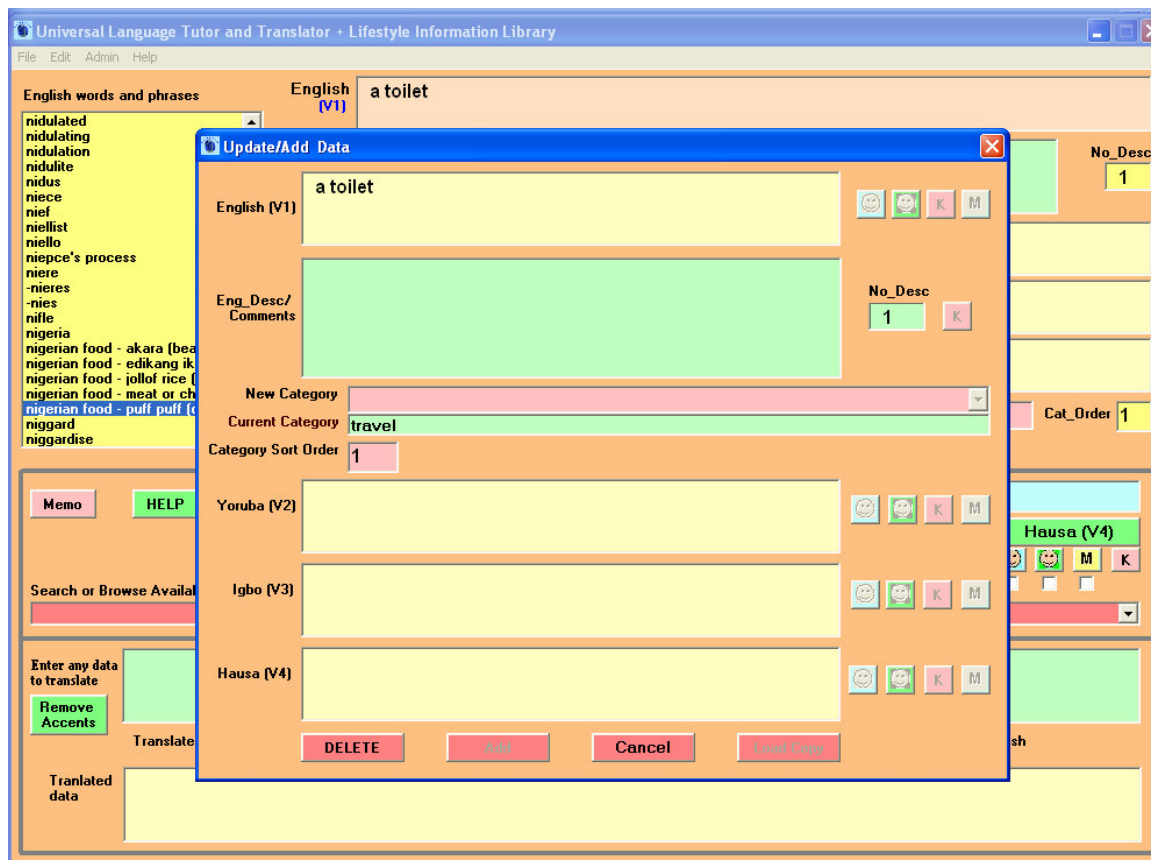


Chapter 14 Deleting Data

The delete process does not have an UNDO button. Hence care must be taken before deleting any data from this application; however two options are included in the system to allow the user to opt out of this process before the data is deleted.

The delete button is illustrated as shown below:





Selecting “DELETE” key (shown above) will delete the data completely except any associated Electronic files while “Cancel” Key will reverse the Delete process thus acting like undo.

Chapter 15

Managing Stored Electronic Files

All audio and video records are stored in the systems application path folder as shown below:



Navigate to this folder to manually delete any record that has electronic file associated and that has been deleted as explained in previous chapter.