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Multi-Lingual in End User Language: Native Language

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Abstract: ***now days in growing globalization, if we wish to expand our business or our interests then obviously we have to communicate with the language understandable at both ends. But this is not possible in certain cases due to the absence of common language. So, we require a translator for effective communication. To make the globalization possible for both ends we have to communication with each other. We propose a web portal which opens at the other end in their own language automatically to provide effective communication. At present, there are few web portals which provide the feature of multilingual but not in very effective way. They provide the link on their portal for translation of language but in our portal we remove this challenge and add the feature that the portal will open at the user end in their understandable language.***

Keywords: ***Multilingual, Web portal, Internationalization***

I. INTRODUCTION

Globalization has pushed communities into greater contact with each other and compelled us to understand multilingual communication [1]. Multi-Lingual is the feature of using several languages at any phase of time. Web application project contains Java source files, templates, JavaScript source Files, SQL schema definitions, ORM mapping files, and HTML templates. All these artefacts are interrelated [2]. Due to the advancement of many languages over English language developers now understands the need of multi-lingual over mono-lingual. Text recognition must be combined with natural language processing so the computer can understand commands [3]. Many computer systems today still only work correctly with English. Internationalization (also called i18n) is done by using strings in a specific language in the code (typically English) and then translating them to the target language [4]. We have now seen that Google search engine advanced itself by providing web search in several other languages which gives translation in 12 other languages excluding English. Now, Multilingualism in computing acts as a bridge between connectivity of internationalization and localization. It has the vast scope in robotics where interactive conversation between human-computer is done. Due to former, natural language has to pass from speech recognition so as computer can able to take input in order to give desired output.

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There are appreciable efforts to link different words of the world's language and forming a dictionary such as freedict.org, moreover several dictionaries were made to link different pair of languages. Panlex.org then came to play to combine such dictionaries under the name of single database but the plan was dropped off due to easy traversal of words in language pairs.

1.1. Internationalization

Internationalization, in relation to computer programming, is the process of designing and writing an application so that it can be used in a global or multinational context. An internationalized program is capable of supporting different languages, as well as date, time, currency, and other values, without software modification. Internationalization is also called I18N by practitioners. The rationale is that there are 18 letters between the beginning *I* and final *N* in internationalization.

1.2. Localization

Localization is the process of designing and writing an application capable of dealing with a specific regional, country, language, cultural, business, or political context. In a sense, every application written for a specific area is localized, although most of these effectively support only one locale. A properly internationalized program facilitates and provides a foundation for localization. Localization is also called L10N for the same reasons and logic used to turn "internationalization" into "I18N" [5].

II. TECHNOLOGY USED

To design a certain project we need different tools for different objects. Java Source File, templates, JavaScript source files, SQL schema definitions, and HTML templates are some of the tools one requires in making project in Multi-Lingual.

The Java programming language supports for multilingual and multicounty environments. For creating the multilingual application first we have the knowledge of internationalization principles and concepts, and then moves on to the specific areas of Java internationalization support.

III. FEATURES

In multilingual from a single portal we can access the same material in different languages. Developing a multilingual application is not limited to the simple replacement of the strings in one language to another. Below are the several features that can make multilingual application successful:

3.1. Language Selection Screen Within The Application

In multilingual portal we provide a language selection option, by which the user will be able to change it anytime without reinstalling the software.

3.2. Language Names Rather Than Flags

When we design a selection screen within the application, make sure the users can see the language names in their native languages. The use of flags is a sensitive issue, as there are countries where more languages are spoken (e.g. India, Canada, Belgium etc.).

3.3. User Interface Adjusted To Every Single Language Version

This means that there should be no truncated text in the application and enough white space to make the product easily readable. It's a good practice to adjust all UI elements containing text to the new language version, e.g. resize buttons, boxes or menus. Colours may have to be adjusted too, as their meaning vary from one culture to another.

3.4. Correctly Displayed Dates And Currencies

Calendar formats, measurements, phone numbers, currencies and addresses are just a few examples of items that have to be changed in the multilingual applications. Forms that have to be filled by the user need to be designed in a way that allows country specific input, e.g. for postcode formats.

3.5. Clear icons and Symbols That Convey The Right Message

There is nothing more confusing than images that have nothing to do with the content or reflect the message that cannot be clearly understood. Before using an icon or symbol in place of a button name or any other element, make sure it is appropriate in the target culture and does not insult the end users.

These are few great and necessary features that can contribute to a global success of multilingual application [6].

IV. METHODS OF MULTILINGUAL PROGRAMMING

4.1. Point Wise Summary

Input words are fully translated into another language which is being fetched as an input. Thereby achieving accuracy. This method seems to be very tedious and difficult sometimes as the users have to listen to the words again and again.

While translating the input into a language, literal translation can be done, e.g. news stories or other similar items. Single input should not be too long. If changes are frequent then listening becomes easier.

4.2. Concluding

Lengthy passages are translated into more than one passage. When longer speech changes alternatively this method becomes similar to point wise summarizing.

While presentation it is required that the two presenters are familiar with the two languages used. This method is very suitable for translating (live) interviews: the host poses his/her question in both languages, the guest answers in his language and the interviewer summarises the answer in the other language. This method has a very vivid effect, particularly in live shows.

4.3. Redesigning, Building Blocks

Focus is on transferring content from one language to another rather on translation. It might be done by raising questions. Building links are created from one language to another in this manner. Participants must understand the languages used, listeners are not required for this knowledge. Team working on the project must be an expert.. It is a very smart and dynamic way of multilingual programming that is fun to listen to. Listeners who only understand one language are able to follow the show even if they do not understand everything.. It is important, however, to take care that central information is always passed on into the other language.

4.4. Frequent Availability of Different Languages: Turn-Taking

By saying frequent availability we mean that two languages are spoken in turns, in this way the presenters try to create a balance between languages being presented. Using different languages is part of the presentation concept without bothering to comply strictly with translating, building blocks. Therefore, it may happen that listeners may not understand at certain times but other parts of the presentation are framed in all languages, like for example local events. It can also have the result that both languages can be heard simultaneously.

If at all this method is used repeatedly for those listeners who can merely understand two languages used. This means that when changing between languages you do not have to take care to transfer meaning. This can be the case in multi-lingual countries or regions but also within immigrant communities.

Example: broadcasting a football game with two presenters who speak different languages and are watching the same game and comment in their respective language. Sometimes they communicate with each other and refer to each other. When it gets particularly gripping each comments in his/her own language, sometimes even at the same time.

Possible elements of multilingual shows are also music, audio art or collages that can be understood by all listeners, irrespective of language.

4.5. Language a Design Element: Games and Art

Experimenting with languages plays a vital role. Language serves as a design element in artistic and experimental aspect. Listening routines can be reconstructed, reflected on and elaborated. New ways of listening, new methods of multilingual programming and even new languages can develop from this method.

Example: Collages, radio plays.

4.6. languages as a Symbolic Presentation

This refers to a brief linguistic excursion into more than one language. The aim is not to communicate something in language.

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The language's presence encapsulates the meaning: that it can be a reference to most of the language across the country from where it is broadcasted; it can be a greeting to those who are also listening. Presenters also use to state about themselves and their cultural background.

4.7. Code-Switching, Language-Hopping

Symbolic presentation of monolingual languages is shown here. Issues like Code-switching and Language-hopping often occurs unintentionally. In case of Language-hopping there is no translation in a variant language instead one changes over to the other language quickly and without knowing anything. This may so happen when the language situation changes over a phone call or a guest in the studio, or when presenters change to another language because they can only think of certain terms in this language. Code-switching refers to an unconscious usage of scientific terms or terms in other languages in every-day life or slang.

In music shows titles and special terms of a music style are included in the language in which it was created (Spanish for flamenco, English for Blues etc.).

4.8. Voice-Over

This is about a montage method of literal translations and recorded interviews that are used in pre-productions of montages, contributions and features. The original is to be heard shortly then it fades into the background and the translation sets in. This sounds quite smart but the two languages are not to be heard equally. There is a language hierarchy because you can only understand one language. The second language has symbolic presence. In a montage the short playing of an original interview clip documents that a one-on-one interview has indeed taken place. The clip also portrays information about the emotional expression of what is being said, the voice of the narrator and the atmosphere.

4.9. Music

While music is not a language that is accessible and understandable by all listeners – music can bring about a lot, especially on emotional level. Multilingual presentations can be accentuated and illustrated by a subsequent piece of music. The listeners get to know a lot about a particular life-style or a special perspective on this associative level – and also about similarities in different day to day lives. Music also has an important function for the presentation framework: the rhythm of a piece of music can link various language presentations on a sound level. Due to this, changes of language have a rhythmic effect and are not felt as clashes. Monolingual listeners are not just "given the slip" but can adjust more easily to listening to the sound of the foreign language [7].

V. MULTILINGUAL ISSUES

5.1. Data Storage Strategies

Data is stored at the back-end either in ISCII or Unicode encoding. Both these encoding schemes have specific merits and demerits. The disk space for storing each character for all Indian Languages is less in ISCII encoding scheme. Unicode prefers two bytes for storing a single character. Due to the problem ascribed, ISCII does not sort all Indian Language characters efficiently, but Unicode provides different collation table for each Indian Language and thus sorting is not of big deal in this encoding scheme.

5.2. Display Matters

As most commonly used web browsers are Unicode enabled therefore all the Indian Language scripts can be represented in Unicode, the data can be presented to the user in Unicode2 at the display end.

Internet Explorer has a rendering engine called Uniscribe4 which does rendering properly while Mozilla and Netscape do not have proper Rendering3 mechanism to display Indian scripts.

5.3. Input Method

There are various Input Method Editors6 (IME) available which are developed in Java, and only be used if an applet is embedded into a web page. We propose to develop an IME that works almost in all web browsers and across different platforms [8].

VI. PROPOSED WORK

We will make an online portal in which same material can be accessed in any country in their own language which makes this project unique and worth to research upon.

Generally we found that the web portals are there in English language, but we want our portal is accessed in different part of world. The problem here comes that some countries want to access the portal In their own native language such as china citizen preferred that the portal opens must be in Chinese and Germans wants to access portal in German language, etc. So to make the portal accessed by everyone web portal must be in multi-Lingual. At present, portals are made having the link of different language to provide the user understanding language. For instance, Google provides this facility to access their portal in different languages.

Rather ascribed above our proposed different portal is more handy and different. In our proposed work we don't provide any link for the translation of pre-defined portal language. Our web portal does automatic translation of the web portal. For example if end-user access that portal in German the portal itself opens in a German language and same is the case with other countries i.e. the portal opens in a language according to the geographical location.

The essence of the project is our portal identified the language setting of the end-user gadget and then accordingly our web portal is opened in that language.

VII. CONCLUSIONS

We propose to rectify the problem of communication using multilingual feature. We will consider the issues that come in multilingual. Already existing tool are used in our proposed system. By using these tools we will make better portal available on the web that can be more efficient. Multilingualism is the use of two or more languages.

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Multilingual online software consists of the content which is localized to support multiple viewers with different languages.

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