

CSYSTEMS™

PROGRAMSKI PAKET ZA KNJIGOVODSTVO

COBA Systems

Languages in Xbase++ and eXpress++ application

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LANGUAGE SETTING :: ENGLISH and LOCALE

RESULT CODE	SYMBOLIC CONSTANT	MESSAGE ENGLISH LANGUAGE	MESSAGE LOCAL LANGUAGE
61	_CALC_	Calculator	Kalkulator
62	_RANGE_	Valid Range is	Dozvoljeni rang je
63	_DESCRIPT_	Description	Opis
64	_WORKING_	Working	U radu
65	_PLEASEWAIT_	Please wait	Molim sačekajte
66	_NETWORK_	Busy network	Zauzeto u mreži
67	_ERROR_	Error	Greška
68	_CHOOSE_	Choose	Izaberi
69	_DOCYES_	Document exists	Dokument postoji
70	_DOCNO_	Document not exists	Dokument ne postoji
71	_EXISTYES_	Exists	Postoji
72	_EXISTNO_	Not exists	Ne postoji
73	_START_	Start	Početak
74	_END_	End	Kraj
75	_LOCALE_	Set language to locale	Postavi jezik na lokalni
76	_ENGLISH_	Set language to english	Postavi jezik na engleski
300	_APPNAME_	LANGUAGE SETTING :: ENGLISH and LOCALE	POSTAVKA JEZIKA :: ENGLISKI i LOKALNI
301	_ENG_	ENGLISH	ENGLISKI
302	_LOC_	LOCALE	LOKALNI

ENGLISH
Set language to english

LOCALE
Set language to locale

Edit

Test

CH file

New

Del

Help

Exit

INTRODUCTION

A business application that will be used in different countries must allow the user of that application to translate inscriptions, titles, messages and other texts in the application into their local language. Such an application should fulfill two conditions:

1. This translation for any user of the application should be quick and easy and not related to knowledge of the operating system and programming.
2. Also, programming the application for this translation should be quick and easy for the application developer.

Here I will provide one of the many possible ways to fulfill both of these conditions with explanations and with the source code of the application.

Note:

The technique presented here is based on an excellent idea and a very good solution given by Roger Donnay in the eXpress++ libraries through the functions: `dc_langset()`, `dc_langmsg()`, `dc_langblock()` in the program `_DCLANG.PRG`, `DCLIPX.LIB`. I used Roger's code by partially simplifying it and adding a DBF file that stores a dictionary for the two languages ENGLISH and LOCAL and a mechanism for modifying that dictionary by the application user (and also by the application developer).

In this solution, the business application has the ability to permanently store two dictionaries in the `LANGUAGE.DBF` database: a dictionary for the English language (default) and a dictionary for the local language. When the application starts, the file `LANGUAGE.DBF` is created automatically.

The user of the application cannot change the dictionary for the English language. It can change the local language dictionary from the active application.

It is understood that the user of the application cannot add new items to the dictionary and delete existing items from the dictionary. He can only write its translation in the local entry against the English entry.

The application developer can change both dictionaries, can add and delete items in both dictionaries, and can create a text file with the source code from the file `LANGUAGE.DBF` that is embedded in the CH file of the application (which greatly reduces the work on coding that file).

During the operation of the application, the user of the application can change the language with which the application works from only English to local and only from local to English.

If the user of the application wants to have two different local languages (which is a rare case), he must create two files `LANGUAGE.DBF`, each file with its own local language, and change them in the application.

UVOD

Poslovna aplikacija koja će se koristiti u različitim državama mora da omogući korisniku te aplikacije da natpise, naslove, poruke i druge tekstove u aplikaciji, prevede na svoj lokalni jezik. Takva aplikacija treba da ispuni dva uslova:

1. Ovo prevođenje za bilo kog korisnika aplikacije bi trebalo da bude brzo i jednostavno i nezvezano za poznavanje operativnog sistema i programiranja.
2. Takođe, programiranje aplikacije za ovo prevođenje, trebalo bi i za programera aplikacije da bude brzo i jednostavno.

Ovde ću dati jedan od mnogo mogućih načina za ispunjenje oba ova uslova sa objašnjenima i sa izvornim kodom aplikacije.

Napomena:

Tehnika koja je izložena ovde bazira se na odličnoj ideji i jako dobrom rešenju koje je dao Roger Donnay u eXpress++ bibliotekama kroz funkcije: `dc_langset()`, `dc_langmsg()`, `dc_langblock()` u programu `_DCLANG.PRG`, `DCLIPX.LIB`.

Ja sam iskoristio Rogerov kod tako što sam ga delimično uprostio i što sam mu dodao DBF fajl koji čuva rečnik za dva jezika ENGLESKI i LOKALNI i mehanizam za izmenu tog rečnika od strane korisnika aplikacije (a takođe i od strane programera aplikacije).

U ovom rešenju poslovna aplikacija ima mogućnost da u `LANGUAGE.DBF` bazi podataka trajno čuva dva rečnika: rečnik za engleski jezik (default) i rečnik za lokalni jezik. Startom aplikacije fajl `LANGUAGE.DBF` se automatski formira.

Korisnik aplikacije ne može da menja rečnik za engleski jezik. On može da menja rečnik za lokalni jezik iz aktivne aplikacije.

Podrazumeva se da korisnik aplikacije ne može da dodaje nove stavke u rečnik i da briše postojeće stavke iz rečnika. Može samo da naspram engleske stavke upiše njen prevod u lokalnu stavku.

Programer aplikacije može da menja oba rečnika, može da dodaje i da briše stavke u oba rečnika i može da iz fajla `LANGUAGE.DBF` formira tekst fajl sa izvornim kodom koji se ugrađuje u CH fajl aplikacije (što jako smanjuje posao na kodiranju tog fajla).

U toku rada aplikacije korisnik aplikacije može da promeni jezik sa kojim aplikacija radi samo sa engleskog na lokalni i samo sa lokalnog na engleski.

Ako korisnik aplikacije hoće da ima dva različita lokalna jezika (što je redak slučaj) mora da napravi dva fajla `LANGUAGE.DBF`, svaki fajl sa svojim lokalnim jezikom, pa da ih menja u aplikaciji.

1. LANGUAGE DATABASE – JEZIČKA BAZA PODATAKA

In the application, the English language (picture 1) should be (automatically) replaced by the local language (picture 2) on command buttons (or other objects) and vice versa.

U aplikaciji treba da se (automatski) na komandnim dugmadima (ili drugim objektima) engleski jezik (slika 1) zameni lokalnim jezikom (slika 2) i obrnuto.

slika 1

75	_LOCALE_	Set language to locale
76	_ENGLISH_	Set language to english
300	_APPNAME_	LANGUAGE SETTING :: ENGLISH and LOCALE
301	_ENG_	ENGLISH
302	_LOC_	LOCALE

ENGLISH
 Set language to english

LOCALE
 Set language to locale

Edit

slika 2

75	_LOCALE_	Set language to locale
76	_ENGLISH_	Set language to english
300	_APPNAME_	LANGUAGE SETTING :: ENGLISH and LOCALE
301	_ENG_	ENGLISH
302	_LOC_	LOCALE

ENGLESKI
 Postavi jezik na engleski

LOKALNI
 Postavi jezik na lokalni

Izmeni

1. First, you need to set up and fill the language database LANGUAGE.DBF (picture 3), which already exists in the application (if it is not there - it is created when the application is first started)

1. Prvo treba postaviti i napuniti jezičku bazu podataka LANGUAGE.DBF (slika 3) koja već postoji u aplikaciji (ako je nema - formira se kod prvog starta aplikacije)

slika 3

LANGUAGE SETTING :: ENGLISH and LOCALE			
RESULT CODE	SYMBOLIC CONSTANT	MESSAGE ENGLISH LANGUAGE	MESSAGE LOCAL LANGUAGE
71	_EXISTYES_	Exists	Postoji
72	_EXISTNO_	Not exists	Ne postoji
73	_START_	Start	Početak
74	_END_	End	Kraj
75	_LOCALE_	Set language to locale	Postavi jezik na lokalni
76	_ENGLISH_	Set language to english	Postavi jezik na engleski
300	_APPNAME_	LANGUAGE SETTING :: ENGLISH and LOCALE	POSTAVKA JEZIKA :: ENGLEDKI i LOKALNI
301	_ENG_	ENGLISH	ENGLESKI
302	_LOC_	LOCALE	LOKALNI

By default, the file LANGUAGE.DBF contains the English language and as the local language it contains the Serbian language (the language of the program author). The application user will translate this MESSAGE LOCAL LANGUAGE local language dictionary into their own language. The data entered in the RESULT CODE, SYMBOLIC CONSTANT and MESSAGE ENGLISH LANGUAGE columns were set by the application developer and cannot be changed by the application user.

Po default-u fajl LANGUAGE.DBF sadrži engleski jezik a kao lokalni jezik sadrži srpski jezik (jezik autora programa). Korisnik aplikacije će ovaj rečnik lokalnog jezika MESSAGE LOCAL LANGUAGE prevesti na svoj jezik. Podatke upisane u kolone RESULT CODE, SYMBOLIC CONSTANT i MESSAGE ENGLISH LANGUAGE postavio je programer aplikacije i te podatke korisnik aplikacije ne može menjati.

When the application is started, the item to be changed is selected and **Edit** command button is clicked (picture 1) and a dialog for editing is displayed (picture 4)

Kada se aplikacija startuje, selektuje se stavka koja se menja i klikne se na komandno dugme **Edit** (slika 1) i dobije se dialog za izmenu (slika 4)

slika 4

Edit

RESULT CODE: 302 SYMBOLIC CONSTANT: _LOC_

LOCALE
LOKALNI

Text in Locale language

OK Help Exit

The user of the application will enter a word from his language here as a translation of the English word. The user of the application can correct some text in the ENGLISH field, but it is possible to prohibit him from doing so and this should be a practice.

Korisnik aplikacije ovde će upisati reč iz svog jezika kao prevod engleske reči. Korisnik aplikacije može da koriguje neki tekst u polju ENGLISH ali mu je to moguće zabraniti i to bi trebalo da bude praksa.

The developer of the application can make an entry in all four fields: RESULT CODE, SYMBOLIC CONSTANT, ENGLISH, LOCALE if the application is in the operating mode: "only for developer" or if there is a file named "lProtect" in the EXE folder of the application. If this file does not exist, entry in the RESULT CODE and SYMBOLIC CONSTANT fields is blocked.

Programer aplikacije može izvršiti upis u sva četiri polja: RESULT CODE, SYMBOLIC CONSTANT, ENGLISH, LOCALE ako je aplikacija u modu rada: "samo za programera" odnosno ako u folderu EXE aplikacije postoji fajl sa nazivom "lProtect". Ako ovaj fajl ne postoji upis u polja RESULT CODE i SYMBOLIC CONSTANT je blokiran.

2. APPLICATION USER - KORISNIK APLIKACIJE

From everything that has been said so far, the user of a business application translates that application into his local language by starting the LANGUAGES.EXE **LANGUAGE SETTING :: ENGLISH and LOCALE** (picture 3) program from that application, which is located in the application's folder or is embedded in the application itself and is started as one of the application's operations.

Iz svega do sada rečenog, korisnik poslovne aplikacije prevodi tu aplikaciju na svoj lokalni jezik tako što iz te aplikacije startuje program LANGUAGES.EXE **LANGUAGE SETTING :: ENGLISH and LOCALE** (slika 3) koji se nalazi u folderu te aplikacije ili je ugrađen u samu aplikaciju i startuje se kao jedna od operacija aplikacije.

After starting the **LANGUAGE SETTING :: ENGLISH and LOCALE** program, the user of the application clicks on the **Edit** command button (picture 1) to change the text in the local language field, i.e. in the MESSAGE LOCAL LANGUAGE column. When finished with these changes, the application user should click on the **LOCALE** command button (pictures 1 and 2) and restart the application. And that is all. There are no other operations for the application user.

Posle starta programa **LANGUAGE SETTING :: ENGLISH and LOCALE** korisnik aplikacije klikom na komandno dugme **Edit** (slika 1) menja tekst u polju za lokalni jezik odnosno u koloni MESSAGE LOCAL LANGUAGE. Kada završi sa ovim izmenama korisnik aplikacije treba da klikne na komandno dugme **LOCALE** (slika 1 i 2) i da restartuje aplikaciju. I to je sve. Nema drugih operacija za korisnika aplikacije.

3. APPLICATION PROGRAMMER - PROGRAMER APLIKACIJE

From everything that has been said so far, the developer of a business application has a slightly bigger job than the user of the application, which I further describe and document here with the source code of the application.

Iz svega do sada rečenog, programer poslovne aplikacije ima malo veći posao od korisnika aplikacije koji ovde na dalje opisujem i dokumentujem sa izvornim kodom aplikacije.

The programmer of a business application must create a separate LANGUAGES.EXE program for that application to work with multiple languages (which is shown in this material), or incorporate functions from LANGUAGES.EXE program into the business application and use them from the business application. Each business application has its own different LANGUAGES.EXE program.

Programer poslovne aplikacije mora da za tu aplikaciju napravi poseban LANGUAGES.EXE program za rad aplikacije sa više jezika (koji je prikazan u ovom materijalu), ili da funkcije iz programa LANGUAGES.EXE ugradi u poslovnu aplikaciju i da ih koristi iz poslovne aplikacije. Svaka poslovna aplikacija ima svoj različit program LANGUAGES.EXE.

The programmer starts the **LANGUAGE.EXE** and **Edit** program and enters the columns: **RESULT CODE**, **SYMBOLIC CONSTANT**, **MESSAGE ENGLISH LANGUAGE**, **MESSAGE LOCAL LANGUAGE**. Lines from **RESULT CODE 1** to **RESULT CODE 300** are reserved for basic messages that any business application can contain. Lines from **RESULT CODE 300** onwards are used for messages and other texts contained in the specific business application for which the **LANGUAGES.EXE** program is being created.

Programer startuje program **LANGUAGE.EXE** i **Edit** pa izvrši upis u kolone: **RESULT CODE**, **SYMBOLIC CONSTANT**, **MESSAGE ENGLISH LANGUAGE**, **MESSAGE LOCAL LANGUAGE**. Redovi od **RESULT CODE 1** do **RESULT CODE 300** rezervisani su za bazne poruke koje može da sadrži svaka poslovna aplikacija. Redovi od **RESULT CODE 300** pa na dalje koriste se za poruke i druge tekstove koje sadrži konkretna poslovna aplikacija za koju se program **LANGUAGES.EXE** pravi.

RESULT CODE is a non-repeating number that is used as a numeric value - as a numeric code - for a symbolic constant in the **LANGUAGES.CH** file of the **LANGUAGES.EXE** program and the corresponding business application

RESULT CODE je numerik koji se ne sme ponoviti a koji se koristi kao numerička vrednost - kao numerički kod - za simboličku konstantu u **LANGUAGES.CH** fajlu programa **LANGUAGES.EXE** i odgovarajuće poslovne aplikacije

SYMBOLIC CONSTANT is a non-repeating string that is used as a symbolic constant in the **LANGUAGES.CH** file of the **LANGUAGES.EXE** program and the corresponding business application.

SYMBOLIC CONSTANT je string koji se ne sme ponoviti a koji se koristi kao simbolička konstanta u **LANGUAGES.CH** fajlu programa **LANGUAGES.EXE** i odgovarajuće poslovne aplikacije.

An example of a code case in the file **LANGUAGES.CH**
 Primer dela koda u CH fajlu **LANGUAGES.CH**

```
// SYMBOLIC CONSTANT    RESULT CODE

#define _START_          73  // Start // Početak
#define _END_            74  // End   // Kraj
#define _LOCALE_         75  // Set language to locale // Postavi jezik na lokalni
#define _ENGLISH_        76  // Set language to english // Postavi jezik na engleski

#define _APPNAME_        300  // LANGUAGE SETTING :: ENGLISH and LOCALE
                           // POSTAVKA JEZIKA :: ENGLEDKI i LOKALNI
#define _ENG_            301  // ENGLISH // ENGLESKI
#define _LOC_            302  // LOCALE  // LOKALNI
```

MESSAGE ENGLISH LANGUAGE is a string or text in English
MESSAGE LOCALE LANGUAGE is a string or text in the local language

MESSAGE ENGLISH LANGUAGE je string odnosno tekst na engleskom
MESSAGE LOCALE LANGUAGE je string odnosno tekst na lokalnom jeziku

An example of how the application uses languages:

The title of the main application window is set from the following code:

```
DCREAD GUI OPTIONS GetOptions FIT TITLE LNG_MSG(_APPNAME_)
```

In the **LNG_MSG(_APPNAME_)** function, the symbolic constant **_APPNAME_** is written as a function parameter. This symbolic constant is a numeric whose value is **300**.

The **LNG_MSG(_APPNAME_)** function finds in the **LANGUAGE.DBF** database in the **RESULT CODE** column a line whose code is = 300, and takes the **TEXT** content of the field from that line:

```
MESSAGE ENGLISH LANGUAGE = "LANGUAGE SETTING :: ENGLISH and LOCALE"
MESSAGE LOCAL LANGUAGE   = "LANGUAGE SETTING :: ENGLISH and LOCAL"
```

If the file **LANGUAGES.INI** is written:

```
[LANGUAGE]
```

```
aplanguage=ENG
```

the title of the window will display the text: "LANGUAGE SETTING :: ENGLISH and LOCALE"

If the file **LANGUAGES.INI** is written:

```
[LANGUAGE]
```

```
aplanguage=LOC
```

the title of the window will display the text: "LANGUAGE SETTING :: ENGLISH and LOCAL"

Primer kako aplikacija koristi jezike:

Naslov glavnog prozora aplikacije postavlja se iz sledećeg koda:

```
DCREAD GUI OPTIONS GetOptions FIT TITLE LNG_MSG(_APPNAME_)
```

U funkciju `LNG_MSG(_APPNAME_)` upisana je simbolička konstanta `_APPNAME_` kao parametar funkcije. Ova simbolička konstanta je numerik čija vrednost je **300**.

Funkcija `LNG_MSG(_APPNAME_)` pronađe u bazi podataka `LANGUAGE.DBF` u koloni `RESULT CODE` red čiji je kod = 300 pa iz tog reda preuzme TEKST sadržaj polja:

```
MESSAGE ENGLISH LANGUAGE = "LANGUAGE SETTING :: ENGLISH and LOCALE"  
MESSAGE LOCAL LANGUAGE   = "POSTAVKA JEZIKA :: ENGLEDKI i LOKALNI"
```

Ako je u fajl `LANGUAGES.INI` upisano:

```
[LANGUAGE]
```

```
applanguage=ENG
```

u naslovu prozora biće prikazan tekst: "LANGUAGE SETTING :: ENGLISH and LOCALE"

Ako je u fajl `LANGUAGES.INI` upisano:

```
[LANGUAGE]
```

```
applanguage=LOC
```

u naslovu prozora biće prikazan tekst: "POSTAVKA JEZIKA :: ENGLESKI i LOKALNI"

4. APPLICATION PROJECT AND APPLICATION BUILDING - PROJEKAT I IZGRADNJA APLIKACIJE -

Required resources to build the `LANGUAGES.EXE` application

Potrebni resursi za izgradnju aplikacije `LANGUAGES.EXE`

In order for all of this to work, programs must be linked to the `LANGUAGES.EXE` application:

Da bi sve ovo funkcionisalo u aplikaciju `LANGUAGES.EXE` moraju se linkovati programi:

```
LANGUAGES.PRG,  
__LANGUAGES.PRG,  
LANGUAGES.CH
```

Both PRG programs must include the file: `#include LANGUAGES.CH`. In that case, the main program of the `LANGUAGES.PRG` application must have procedures:

Oba PRG programa moraju imati uključen fajl: `#include LANGUAGES.CH`. U tom slučaju glavni program aplikacije `LANGUAGES.PRG` mora imati procedure:

```
APPSYS(),  
DBESYS(),  
MAIN()
```

The **LANGUAGES.PRG** program contains procedures and functions:

Program **LANGUAGES.PRG** sadrži procedure i funkcije:

```
PROCEDURE APPSYS(),  
PROCEDURE DBESYS(),  
PROCEDURE MAIN()
```

```
FUNCTION MAKE_LANGUAGE()
```

```
    STATIC FUNCTION INSERT_ITEM()  
    STATIC FUNCTION DELETE_ITEM()  
    STATIC FUNCTION EDIT_LANGUAGE()  
    STATIC FUNCTION CH_file()  
    STATIC FUNCTION help_programa()
```

The **__LANGUAGES.PRG** program contains functions:

Program **__LANGUAGES.PRG** sadrži funkcije:

```
FUNCTION LNG_MSG( nMessage )  
FUNCTION LNG_SET( applanguage, lSet, aLanguage )  
    FUNCTION create_language_list(LNGFILE)  
    STATIC FUNCTION fill_language_list(LNGFILE)  
FUNCTION dc_langblock ( bBlock )  
FUNCTION dc_langcustom( bBlock )
```

There must also be files in the **LANGUAGES.EXE** application folder

Također u folderu aplikacije **LANGUAGES.EXE** moraju postojati fajlovi

```
LANGUAGES.DBF  
LANGUAGES.INI
```

The helper program **LANGUAGES.EXE** created in this way for the business application **APP.EXE** is located in the same folder as the **APP.EXE** application and is started either from this application or independently. This program allows the user of the **APP.EXE** application to set the operation of the application to English or to the local language. It also allows the **APP.EXE** user to make the necessary local language changes.

Tako napravljen pomoćni program **LANGUAGES.EXE** za poslovnu aplikaciju **APP.EXE** nalazi se u istom folderu u kome se nalazi i aplikacija **APP.EXE** i startuje se ili iz ove aplikacije ili samostalno. Ovaj program dozvoljava korisniku aplikacije **APP.EXE** da podesi rad aplikacije na engleski jezik ili na lokalni jezik. Također dozvoljava korisniku aplikacije **APP.EXE** da izvrši potrebne izmene u lokalnom jeziku.

Required resources to build a business application **APP.EXE**

Potrebni resursi za izgradnju poslovne aplikacije **APP.EXE**

If the technology for working with multiple languages in one business application **APP.EXE** is built into the code of that business application, then the program **LANGUAGES.PRG** is built into the code of the **APP.EXE** application, from which the procedures **AppSys()**, **DbeSys()** and **Main()**. All other procedures and functions remain the same - they are not touched:

Ako se tehnologija za rad sa više jezika u jednoj poslovnoj aplikaciji APP.EXE ugrađuje u kod te poslovne aplikacije, tada se u kod aplikacije APP.EXE ugrađuje program **LANGUAGES.PRG** iz koga se izbacе procedure AppSys(), DbеSys() i Main(). Sve ostale procedure i funkcije ostaju iste – ne diraju se:

The **LANGUAGES.PRG** program contains functions:

Program **LANGUAGES.PRG** sadrži funkcije:

```
FUNCTION MAKE_LANGUAGE()  
  
STATIC FUNCTION INSERT_ITEM()  
STATIC FUNCTION DELETE_ITEM()  
STATIC FUNCTION EDIT_LANGUAGE()  
STATIC FUNCTION CH_file()  
STATIC FUNCTION help_programa()
```

The **__LANGUAGES.PRG** program contains functions:

Program **__LANGUAGES.PRG** sadrži funkcije:

```
FUNCTION LNG_MSG( nMessage )  
FUNCTION LNG_SET( applanguage, lSet, aLanguage )  
    FUNCTION create_language_list(LNGFILE)  
    STATIC FUNCTION fill_language_list(LNGFILE)  
FUNCTION dc_langblock ( bBlock )  
FUNCTION dc_langcustom( bBlock )
```

PRG and CH Programs must be linked to the APP.EXE application:

U aplikaciju APP.EXE moraju se linkovati PRG i CH programi:

```
LANGUAGES.PRG,  
__LANGUAGES.PRG,  
LANGUAGES.CH
```

There must also be files in the **LANGUAGES.EXE** application folder

Takođe u folderu aplikacije **LANGUAGES.EXE** moraju postojati fajlovi

```
LANGUAGES.DBF  
LANGUAGES.INI
```

5. DEFAULT APPLICATION PROJECT (USAGE) – DEFAULT APLIKACIONI PROJEKAT (UPOTREBA)

The source code of the default project for the default application **LANGUAGES.EXE** is supplied with this book, which contains the files:

Uz ovu knjigu isporučuje se izvorni kod default projekta za default aplikaciju **LANGUAGES.EXE** koji sadrži fajlove:

```
LANGUAGES.BAT  
LANGUAGES.XPJ  
LANGUAGES.PRG  
__LANGUAGES.PRG  
LANGUAGES.CH
```

LANGUAGES.DBF
LANGUAGES.INI

5.1.

The programmer should start the LANGUAGES.BAT program, which will create the LANGUAGES.EXE application via the LANGUAGES.XPJ project file and PRG and CH files.

Programer treba da startuje program LANGUAGES.BAT koji će preko projekt fajla LANGUAGES.XPJ i preko PRG i CH fajlova napraviti aplikaciju LANGUAGES.EXE

5.2.

The programmer should start the LANGUAGES.EXE application, for example in the C:\TEST folder, i.e. in the folder:

Programer treba da startuje aplikaciju LANGUAGES.EXE na primer u folderu C:\TEST odnosno u folderu:

C:\TEST\LANGUAGES.EXE

which will automatically create the initial files:

koja će automatski napraviti inicijalne fajlove:

C:\TEST\LANGUAGES.INI

C:\TEST\DBF\LANGUAGES.DBF

5.3.

The LANGUAGE.EXE application is initially started in ENGLISH LANGUAGE mode

The programmer should, from the LANGUAGE.EXE application, by clicking the Edit command button, make changes in the dictionary for ENGLISH and LOCAL LANGUAGE and adapt that dictionary to the APP.EXE business application.

He needs to make changes in the texts from code 1 to code 299 that are applied in all applications, that is, to translate all English texts into local texts. If necessary, to modify some existing English/local texts from 1 to 299, to delete unnecessary texts, to add new texts. In particular, it should add texts from code 300 onwards that refer only to a specific business application and are not used in other applications.

Aplikacija LANGUAGE.EXE inicijalno se startuje u modu rada ENGLISKI JEZIK

Programer treba da iz aplikacije LANGUAGE.EXE klikom na komandno dugme Edit izvrši izmene u rečniku za ENGLISKI i LOKALNI JEZIK i prilagodi taj rečnik poslovnoj aplikaciji APP.EXE.

Treba da izvrši izmene u tekstovima od koda 1 do koda 299 koji se primenjuju u svim aplikacijama, odnosno da sve engleske tekstove prevede u lokalne tekstove. Po potrebi da neke postojeće engleske/lokalne tekstove od 1 do 299 izmeni, da obriše bespotrebne tekstove, da doda nove tekstove. Posebno treba da doda tekstove od koda 300 pa na dalje koji se odnose samo na konkretnu poslovnu aplikaciju i ne koriste se u drugim aplikacijama.

5.4.

When the developer completes this job, the language database LANGUAGES.DBF is formed for the English language and the local language that the developer specified WITH THE BUSINESS APPLICATION MESSAGE DICTIONARY APP.EXE.

Now the file LANGUAGES.CH should be created from the data of the LANGUAGES.DBF file.

This is done by clicking on the command button CH file, which automatically creates the file C:\TEST__LANGUAGES.CH

and opens for viewing in the NOTEPAD.EXE editor.

The files LANGUAGES.DBF and __LANGUAGES.CH are no longer the default (initial) files of the LANGUAGES.EXE program, but are now SPECIALIZED files intended for the BUSINESS APPLICATION APP.EXE

Kada programer završi ovaj posao baza podataka jezika LANGUAGES.DBF formirana je za engleski jezik i lokalni jezik koji je programer zadao SA REČNIKOM PORUKA ZA POSLOVNU APLIKACIJU APP.EXE.

Sada treba iz podataka fajla LANGUAGES.DBF formirati fajl LANGUAGES.CH.

To se radi klikom na komandno dugme CH file čime se automatski formira fajl

C:\TEST__LANGUAGES.CH

i otvara se za pregled u editoru NOTEPAD.EXE.

Fajlovi LANGUAGES.DBF i __LANGUAGES.CH nisu više default (inicijalni) fajlovi programa LANGUAGES.EXE nego su sada SPECIJALIZOVANI fajlovi namenjeni ZA POSLOVNU APLIKACIJU APP.EXE

5.5.

The developer now inserts the LANGUAGES.INI, LANGUAGES.DBF, and __LANGUAGES.CH files into the APP.EXE business application project after renaming it to LANGUAGES.CH. In each PRG file of the APP.EXE business application, the following command is entered: Programer sada u projekat poslovne aplikacije APP.EXE ubacuje fajlove LANGUAGES.INI, LANGUAGES.DBF i __LANGUAGES.CH pošto ga prethodno preimenuje u LANGUAGES.CH. U svaki PRG fajl poslovne aplikacije APP.EXE upisuje se komanda:

```
#include LANGUAGES.CH
```

In the main() procedure of the APP.EXE application, at the beginning of this procedure, you should enter:

U main() proceduru aplikacija APP.EXE, na početak ove procedure, treba upisati:

```
PUBLIC ini := gde_exe()+"\LANGUAGES.INI"
PUBLIC applanguage, snLanguage
IF FILE(ini)==.F.
    DC_INIWRITE(ini,"LANGUAGE","applanguage","LOC") // formira INI ako ga nema
ENDIF
applanguage := DC_INIREAD(ini,"LANGUAGE","applanguage")
* applanguage = "LOC" // App works with local language/App radi sa lokalnim jezikom
* applanguage = "ENG" // App works with English language/App radi sa engleskim
snLanguage := applanguage
LNG_SET( applanguage ) // __LANGUAGES.PRG
* ----- LANGUAGES.INI
```

In each PRG file of the APP.EXE application, where some text needs to be displayed and printed, that text is called via the LNG_MSG(SYMBOLIC CONSTANT) function, for example: instead of:

U svaki PRG fajl aplikacije APP.EXE, gde treba izvršiti prikaz i štampu nekog teksta, taj tekst se poziva preko funkcije LNG_MSG(SYMBOLIC CONSTANT) na primer:

instead of:

umesto:

```
DCREAD GUI OPTIONS GetOptions FIT TITLE " LANGUAGE SETTING :: ENGLISH and LOCALE"
```

enter:

upisuje se:

```
DCREAD GUI OPTIONS GetOptions FIT TITLE LNG_MSG(_APPNAME_)
```

5.6.

Now we need to relink and compile (build) the EXE application APP.EXE with its LANGUAGES.INI, LANGUAGES.DBF and LANGUAGES.CH files and with all its PRG files supplemented

Sada treba ponovo linkovati i kompajlovati (izgraditi) EXE aplikaciju APP.EXE sa njenim fajlom LANGUAGES.INI, LANGUAGES.DBF i LANGUAGES.CH i sa dopunjenim svim njenim PRG fajlovima

5.7

The user of the application is supplied for work:

Korisniku aplikacije isporučuje se za rad:

APP.EXE

LANGUAGES.EXE

LANGUAGES.DBF

LANGUAGES.INI

RunTime Alaska Xbase++ 2.0 and RunTime eXpress++ 2.0

Option: PostgreSQL server 9.4 or newer

6. DEFAULT APPLICATION PROJECT (FILES) – DEFAULT APLIKACIONI PROJEKAT (FAJLOVI)

:: FILE: LANGUAGES.BAT

```
@echo off
cls
PBUILD.EXE LANGUAGES.XPJ > _____.TXT
NOTEPAD _____.TXT
```

// FILE: LNUAGES.XPJ

```
[PROJECT]
  DEBUG          = no
  VERSION        = 2.0
  LANGUAGES.XPJ
[LANGUAGES.XPJ]
  LANGUAGES.EXE
[LANGUAGES.EXE]
  COMPILE        = xpp
  COMPILE_FLAGS  = -q
  DEBUG_SAVE     = yes
  GUI            = yes
  LINKER         = alink
  LINK_FLAGS     =
  RC_COMPILE     = arc
  RC_FLAGS       = -v
  OBJ_DIR        = _____OBJ
// $START-AUTODEPEND
//   STD.CH
//   SET.CH
```



```
// NATMSG.CH
// GET.CH
// PROMPT.CH
// MEMVAR.CH
// COLLAT.CH
// GRA.CH
// XBP.CH
// FONT.CH
// COMMON.CH
// APPEVENT.CH
// APPEDIT.CH
// APP.CH
// APPBROW.CH
LANGUAGES.OBJ
__LANGUAGES.OBJ
// $STOP-AUTODEPEND
    dclipx.lib                // eXpress++
    XBTBASE1.LIB              // XbToolsIII
    XBTBASE2.LIB              // XbToolsIII
(PRG)\LANGUAGES.PRG
(PRG)\__LANGUAGES.PRG
```

; FILE: LANGUAGES.INI

```
[LANGUAGE]
aplanguage=LOC
```

// FILE: LANGUAGES.CH

```
// FOR EVERY APPLICATION
#define _OK_                1 // OK // OK
#define _CANCEL_            2 // Cancel // Odustani
#define _ABORT_              3 // Abort // Prekini
#define _HELP_              4 // Help // Pomoć
#define _WAIT_              5 // Wait, operation is in
#define _YES_               6 // Yes // Da
#define _NO_                7 // No // Ne
#define _EXIT_              8 // Exit // Izlaz
#define _PRINT_             9 // Print // Štampaj
#define _EXECUTE_          10 // Execute // Izvrši
#define _RESULTS_         11 // Results // Rezultat
#define _USER_            12 // User // Korisnik
#define _PASSWORD_        13 // Password // Lozinka
#define _CREATE_          14 // Create // Kreiraj
#define _NEW_             15 // New // Novo
#define _DEL_             16 // Del // Briši
#define _SAVE_            17 // Save // Sačuvaj
#define _EDIT_            18 // Edit // Izmeni
#define _FINDNAME_        19 // Find name // Nađi naziv
#define _FINDCODE_        20 // Find code // Nađi kod
#define _FINDTEXT_        21 // Text to find // Nađi tekst
#define _FINDDATE_        22 // Find date // Nađi datum
#define _FINDCATALOG_     23 // Find catalog // Nađi katalog
#define _FINDBARCODE_     24 // Find barcode // Nađi barkod
#define _FINDLINK_        25 // Find link // Nađi vezu
```

```

#define _FINDMARK_           26 // find mark // Nađi oznaku
#define _FINDNUMBER_        27 // Find number // Nađi broj
#define _NOTFOUND_          28 // Not found // Nije nađeno
#define _FOUND_             29 // Found // Nađeno je
#define _DAY_               30 // Day // Dan
#define _WEEK_               31 // Week // Nedelja
#define _MONTH_              32 // Month // Mesec
#define _YEAR_               33 // Year // Godina
#define _MONTH1_             34 // January // Januar
#define _MONTH2_             35 // February // Februar
#define _MONTH3_             36 // March // Mart
#define _MONTH4_             37 // April // April
#define _MONTH5_             38 // May // Maj
#define _MONTH6_             39 // June // Juni
#define _MONTH7_             40 // July // Juli
#define _MONTH8_             41 // August // Avgust
#define _MONTH9_             42 // September // Septembar
#define _MONTH10_            43 // October // Oktobar
#define _MONTH11_           44 // November // Novembar
#define _MONTH12_           45 // December // Decembar
#define _DAY1_               46 // Sunday // Nedelja
#define _DAY2_               47 // Monday // Ponedeljak
#define _DAY3_               48 // Tuesday // Utorak
#define _DAY4_               49 // Wednesday // Sreda
#define _DAY5_               50 // Thursday // Cetvrtak
#define _DAY6_               51 // Friday // Petak
#define _DAY7_               52 // Saturday // Subota
#define _toDAY_              53 // Today // Danas
#define _DIRYES_             54 // Choose a Directory
#define _DIRNO_              55 // Invalid Drive or Directory
#define _FILENAME_          56 // File name // Naziv fajla
#define _FILEYES_           57 // File exists // Fajl postoji
#define _FILENO_            58 // File not exists
#define _DBYES_              59 // Database exists
#define _DBNO_               60 // Database not exists
#define _CALC_               61 // Calculator // Kalkulator
#define _RANGE_              62 // Valid Range is
#define _DESCRIPT_           63 // Description // Opis
#define _WORKING_            64 // Working // U radu
#define _PLEASEWAIT_         65 // Please wait // Molim sačekajte
#define _NETWORK_           66 // Busy network // Zauzeto u mreži
#define _ERROR_              67 // Error // Greška
#define _CHOOSE_             68 // Choose // Izaberi
#define _DOCYES_             69 // Document exists postoji
#define _DOCNO_              70 // Document not exists
#define _EXISTYES_           71 // Exists // Postoji
#define _EXISTNO_            72 // Not exists // Ne postoji
#define _START_              73 // Start // Početak
#define _END_                74 // End // Kraj
#define _LOCALE_             75 // Set language to locale //
#define _ENGLISH_            76 // Set language to english //
// ONLY FOR APP.EXE:
#define _APPNAME_            300 // LANGUAGE SETTING :: ENGLISH and
#define _ENG_                301 // ENGLISH // ENGLSKI
#define _LOC_                302 // LOCALE // LOKALNI

```

*** FILE: LANGUAGES.PRG**

```
/////////////////////////////////////////////////////////////////
//                                                                    //
//                                                                    //
//  TEST_LANGUAGES.PRG                                              //
//                                                                    //
//  06-02-2024                                                    //
//                                                                    //
//  www.cobasystems.com --- COBA Systems --- Slobodan Stanojević Coba //
//  Open Source Project BAST Business Account Software Technology //
//  www.Alaska-Software.com --- Alaska Xbase++ version 2.0.1503    //
//  www.Donnay-software.com --- eXpress++ version 2.0.268         //
//  Sergej Spirin --- FastReport for Xbase++ version 27.03.2015    //
//                                                                    //
//  Database Server PostgreSQL          version 9.4.4.             //
//                                                                    //
//                                                                    //
/////////////////////////////////////////////////////////////////
```

```
* FUNCTION MAKE_LANGUAGE()
*   STATIC FUNCTION INSERT_ITEM()
*   STATIC FUNCTION DELETE_ITEM()
*   STATIC FUNCTION EDIT_LANGUAGE()
*   STATIC FUNCTION CH_file()
*   STATIC FUNCTION help_programa()
```

```
#include "Gra.ch"
#include "Xbp.ch"
#include "Font.ch"
#include "Common.ch"
#include "Appevent.ch"
#include "Appedit.ch"
#include "Appbrow.ch"
```

```
#include "Directry.ch" // za funkciju directory()
```

```
#include "xbtsys.ch"
#include "dcdialog.ch"
#include "dcgra.ch"
```

```
#include "dll.ch"
#include "Dmlb.ch"
#include "DbfDbe.ch"
```

```
//-----
// LANGUAGES.CH
// SADRŽI <SYMBOLIC CONSTANTS> I NJIHOVE <RESULTS> NUMERIČKE VREDNOSTI
// I ZA SVAKU APLIKACIJU JE OVAJ <LANGUAGES.CH> SA RAZLIČITIM SADRŽAJEM.
// U NJEMU SE NE SME NIŠTA MENJATI JER JE SVE PREKO <RESULTS> POVEZANO
// SA PODACIMA IZ FAJLA <LANGUAGES.DBF> KOJI SADRŽI TEKSTOVE IZ PROGRAMA
// KOJI SE MOGU PRIKAZATI U DVA JEZIKA:
```

```
//          DCLANG_ENGLISH  // engleski jezik
//          DCLANG_LOCALE   // korisnikov lokalni jezik
// TEKSTOVE ZA DCLANG_LOCALE U DBF UPISUJE I MENJA SAM KORISNIK PROGRAMA

// LANGUAGES.CH
// CONTAINS <SYMBOLIC CONSTANTS> AND THEIR <RESULTS> NUMERIC VALUES
// AND FOR EACH APPLICATION THERE IS THIS <LANGUAGES.CH> WITH DIFFERENT CONTENTS.
// NOTHING MUST BE CHANGED IN IT BECAUSE EVERYTHING IS CONNECTED THROUGH <RESULTS>
// WITH DATA FROM THE FILE <LANGUAGES.DBF> WHICH CONTAINS THE TEXTS FROM THE PROGRAM
// WHICH CAN BE DISPLAYED IN TWO LANGUAGES:
//          DCLANG_ENGLISH // English language
//          DCLANG_LOCALE  // user's local language
// TEXTS FOR DCLANG_LOCALE IN DBF ARE WRITE AND CHANGED BY THE USER OF THE PROGRAM
//-----
```

```
#include "LANGUAGES.CH"
```

```
PROCEDURE AppSys()
```

```
// Desktop remains application window
```

```
RETURN
```

```
/*
* If you are working with a PostgreSQL database, then this procedure must be
activated:
```

```
* Ako se radi sa PostgreSQL bazom podataka tada se mora aktivirati ova procedura:
```

```
PROCEDURE DbeSys() // Option
```

```
// Overload the default DBESYS for your required DBE
IF ! DbeLoad( "DBFDBE", .T.) // load engine for DBF files
    msgbox( "Database Engine DBFDBE not loaded" , "STOP" )
    QUIT
ENDIF
IF ! DbeLoad( "NTXDBE", .T.) // load engine for DBF files
    msgbox( "Database Engine NTXDBE not loaded" , "STOP" )
    QUIT
ENDIF
DbeBuild( "DBFNTX", "DBFDBE", "NTXDBE" ) // DBE=DBFNTX
DbeSetDefault("DBFNTX")

DbeLoad("PGDBE")
DbeSetDefault("PGDBE")
```

```
RETURN
```

```
*/
```

```
FUNCTION Gde_Exe()
```

```
    cApp_Folder_Exe := STRTRAN(AppName(.T.), "\"+AppName())
```

```
RETURN( cApp_Folder_Exe )
```

```
PROCEDURE Main()
```

```
SET DATE GERMAN
```

```
SET CENTURY ON
```

```
SET CHARSET TO ANSI
```

```
*****
MAKE_LANGUAGE()
*****
```

RETURN

```
*****
FUNCTION MAKE_LANGUAGE()
*****
LOCAL radno:=SELECT()
LOCAL getlist := {} ,  GetOptions, oDlg, oBrowse
* ----- LANGUAGES.INI
PUBLIC ini := gde_exe()+"\LANGUAGES.INI"
PUBLIC applanguage, snLanguage
IF FILE(ini)=.F.
    DC_INIWRITE(ini,"LANGUAGE","applanguage","LOC")
ENDIF
applanguage := DC_INIREAD(ini,"LANGUAGE","applanguage")
* applanguage = "LOC" // App works with local language
* applanguage = "ENG" // App works with English language
snLanguage := applanguage
* ----- LANGUAGES.INI
*****
LNG_SET( applanguage ) // __LANGUAGES.PRG
*****

* ----- LANGUAGES.DBF
* gde_exe() -> strtran( appname(.t.), "\"+appname() )
* DIRMAKE( gde_exe()+"\DBF")
LNGFILE := gde_exe()+"\DBF\LANGUAGES.DBF" // make in __LANGUAGES.PRG
* ----- LANGUAGES.DBF

USE (LNGFILE) NEW EXCLUSIVE ALIAS "LNG" VIA "DBFNTX"
* VIA "DBFNTX" = je obavezno kada se radi sa DbeSetDefault("PGDBE")
* VIA "DBFNTX" = is required when working with DbeSetDefault("PGDBE")

IF NetErr()
    MsgBox(LNGFILE+chr(13)+LNG_MSG(_NET_), "Stop")
    RETURN .F.
ENDIF

* ----- lProtect
IF FILE(gde_exe()+"\lProtect")
    lProtect := .F.
    // Operating mode - For developer only - Samo za programera
ELSE
    lProtect := .T.
    // Operating mode - For user of program - za korisnika programa
ENDIF
* ----- lProtect
```

```
RESTART:=.F.  
HOR := 40  
VER := 20
```

```
@ 1,1 dcbrowse oBrowse ALIAS "LNG" SIZE HOR,VER FIT // FONT "11.Consolas"
```

```
DCBROWSECOL FIELD LNG->CODE_      HEADER "RESULT CODE"          PARENT oBrowse  
DCBROWSECOL FIELD LNG->MARK_      HEADER "SYMBOLIC CONSTANT"     PARENT oBrowse  
DCBROWSECOL FIELD LNG->ENGLISH_   HEADER "MESSAGE ENGLISH LANGUAGE" PARENT oBrowse  
DCBROWSECOL FIELD LNG->LOCALE_    HEADER "MESSAGE LOCAL LANGUAGE" PARENT oBrowse
```

```
xx:=VER+2  
PUBLIC coo1:= GRA_CLR_WHITE // font  
PUBLIC coo2:= GRA_CLR_DARKRED // background
```

```
@xx,1 dcpushbuttonxp ;  
CAPTION LNG_MSG(_ENG_)+";"+LNG_MSG(_ENGLISH_) notabstop ;  
SIZE 30,3 ;  
ACTION {|| ;  
    DC_INIWRITE(ini,"LANGUAGE","applanguage","ENG") ,;  
    RESTART:=.T. ,;  
    DC_ReadGuiEvent(DCGUI_EXIT_OK,GetList) } ;  
COLOR {|| IIF(applanguage = "ENG", {coo1,coo2},{NIL,NIL})}
```

```
@xx,1+30+2 dcpushbuttonxp ;  
CAPTION LNG_MSG(_LOC_)+";"+LNG_MSG(_LOCALE_) notabstop ;  
SIZE 30,3 ;  
ACTION {|| ;  
    DC_INIWRITE(ini,"LANGUAGE","applanguage","LOC") ,;  
    RESTART:=.T. ,;  
    DC_ReadGuiEvent(DCGUI_EXIT_OK,GetList) } ;  
COLOR {|| IIF(applanguage = "LOC", {coo1,coo2},{NIL,NIL})}
```

```
@xx,1+30+2+30+2 dcpushbuttonxp ;  
CAPTION LNG_MSG(_EDIT_) notabstop ;  
SIZE 15,3 ;  
ACTION {|| ;  
    EDIT_LANGUAGE() ,;  
    dc_getrefresh(GetList),;  
    oBrowse:refreshall(), setAppfocus(oBrowse) }
```

```
@xx,1+30+2+30+2+15+2 dcpushbuttonxp ;  
CAPTION "Test" notabstop ;  
SIZE 15,3 ;  
ACTION {|| ;  
    MsgBox(LNG_MSG(_NOTFOUND_), "_NOTFOUND_") ,;  
    MsgBox(LNG_MSG(_WAIT_), "_WAIT_") ,;  
    oBrowse:refreshall(), setAppfocus(oBrowse) }
```

```
@xx,1+30+2+30+2+15+2+15+2 dcpushbuttonxp ;  
CAPTION "CH file" notabstop ;  
SIZE 15,3 ;  
ACTION {|| ;
```

```

        CH_file(),;
        oBrowse:refreshall(), setAppfocus(oBrowse) } WHEN {|| !lProtect }

@xx,1+30+2+30+2+15+2+15+2+15+2 dcpushbuttonxp ;
    CAPTION LNG_MSG(_NEW_) notabstop ;
    SIZE 15,3 ;
    ACTION {|| ;
        INSERT_ITEM(),;
        oBrowse:refreshall(), setAppfocus(oBrowse) } WHEN {|| !lProtect }

@xx,1+30+2+30+2+15+2+15+2+15+2+15+2 dcpushbuttonxp ;
    CAPTION LNG_MSG(_DEL_) notabstop ;
    SIZE 15,3 ;
    ACTION {|| ;
        DELETE_ITEM(),;
        oBrowse:refreshall(), setAppfocus(oBrowse) } WHEN {|| !lProtect }

@xx,1+30+2+30+2+15+2+15+2+15+2+15+2+15+2 dcpushbuttonxp ;
    CAPTION LNG_MSG(_HELP_) notabstop ;
    SIZE 15,3 ;
    ACTION {|| ;
        help_programa(),;
        oBrowse:refreshall(), setAppfocus(oBrowse) }

@xx,1+30+2+30+2+15+2+15+2+15+2+15+2+15+2+15+2 dcpushbuttonxp ;
    CAPTION LNG_MSG(_EXIT_) notabstop ;
    SIZE 13,3 ;
    ACTION {|| DC_ReadGuiEvent(DCGUI_EXIT_OK,GetList) }

DCHOTKEY asc("+") ACTION {|| memowrit(gde_exe()+"\lProtect","DEVELOPER MOD") ,;
    MsgBox("DEVELOPER MOD","OK") ,;
    RESTART:=.T. ,;
    DC_ReadGuiEvent(DCGUI_EXIT_OK,GetList) }

DCHOTKEY asc("-") ACTION {|| FileDelete(gde_exe()+"\lProtect") ,;
    MsgBox("USER MOD","OK") ,;
    RESTART:=.T. ,;
    DC_ReadGuiEvent(DCGUI_EXIT_OK,GetList) } ;

DCGETOPTIONS FONT "8.Helv Bold" AUTORESIZE NOESCAPEKEY

DCREAD GUI ;
OPTIONS GetOptions ;
PARENT @oDlg ;
TITLE LNG_MSG(_APPNAME_) FIT ;
EVAL {|o| SETAPPWINDOW(o)} MODAL

SELECT "LNG";USE

IF RESTART==.T.
    MAIN()
ENDIF

RETURN NIL

```



```

* STATIC FUNCTION INSERT_ITEM()
* STATIC FUNCTION DELETE_ITEM()
* STATIC FUNCTION EDIT_LANGUAGE()
* STATIC FUNCTION CH_file()
* STATIC FUNCTION help_programa()

*****
STATIC FUNCTION INSERT_ITEM()
*****
* STOP("For developer only - Samo za programera",0)
LOCAL radno:=SELECT()
APPEND BLANK
nrecno := recno()
ntest  := recno()

*-----
DO WHILE .T.

go top
locate for CODE_=ntest

if found()
    MsgBox("Found CODE_ "+var2char(ntest),"stop" )
    ntest:=ntest+1
    loop
else
    exit
endif

ENDDO
*-----

goto nrecno
replace CODE_ with ntest, MARK_ WITH "*** NEW ITEM ***"

SELECT(radno)
RETURN NIL

*****
STATIC FUNCTION DELETE_ITEM()
*****
* STOP("For developer only - Samo za programera",0)
LOCAL radno:=SELECT()
skip -1
nrecno := recno() // prethodna stavka // previous item
skip

DELETE
PACK

goto nrecno
SELECT(radno)
RETURN NIL

```

```
*****
STATIC FUNCTION EDIT_LANGUAGE() // rucni upis u polja
*****

LOCAL GetList := {}, GetOptions, oDlg, boja, xx:=0, zz:=1+0.2
LOCAL aCUR := {"user32.dll",114}
LOCAL oCUR := {"user32.dll",112}

boja := { GRA_CLR_BLACK, GRA_CLR_WHITE }

// moze sa get...
SET DATE FORMAT TO 'dd.mm.yyyy'

IF FILE(gde_exe()+"\lProtect")
    lProtect := .F.
ELSE
    lProtect := .T.
ENDIF

xx:=xx+zz
@ xx, 1 DCSAY "RESULT CODE:" SAYSIZE 0
@ xx, 15 DCGET CODE_ EDITPROTECT {|| lprotect } ;
CURSOR aCUR MESSAGE "Code"
//xx:=xx+zz
@ xx, 30 DCSAY "SYMBOLIC CONSTANT:" SAYSIZE 0
@ xx, 53 DCGET MARK_ EDITPROTECT {|| lprotect } ;
CURSOR aCUR MESSAGE "Symbolic constant"

xx:=xx+zz + zz
@ xx, 1 DCGET ENGLISH_ ;
CURSOR aCUR MESSAGE "Text in English"

xx:=xx+zz
@ xx, 1 DCGET LOCALE_ ;
CURSOR aCUR MESSAGE "Text in Locale language"

xx:=xx+zz
xx:=xx+zz

@ xx,1 DCMESSAGEBOX OBJECT oMsgBox SIZE 60.2,2 ;
TEXTOBJECT MESSAGE OPTIONS XBPSTATIC_TEXT_WORDBREAK;
COLOR GRA_CLR_DARKRED

xx:=xx+zz+2

@ xx,1 DCPUSHBUTTONXP CAPTION LNG_MSG(_OK_) OBJECT oexit;
CURSOR aCUR ;
SIZE 10,2.5 FONT "8.Helv Bold";
ACTION {||DC_ReadGuiEvent(DCGUI_EXIT_OK,GetList)} ; // izlaz sa Esc sa
prihvatanjem izmena
MESSAGE "Potvrda izmena i izlaz" // zahteva: DCGETOPTIONS
NOESCAPEKEY ;
```

```

@ xx,140-26 DCPUSHBUTTONXP CAPTION LNG_MSG(_HELP_) ;
ACCELKEY xbeK_F1;
CURSOR aCUR ;
SIZE 10,2.5 FONT "8.Helv Bold";
ACTION {||help_programa()} ;
MESSAGE "Uputstvo za rad taster - F1"

@ xx,140-15 DCPUSHBUTTONXP CAPTION LNG_MSG(_EXIT_) OBJECT oexit;
ACCELKEY xbeK_ESC;
CURSOR aCUR ;
SIZE 10,2.5 FONT "8.Helv Bold";
ACTION {||DC_ReadGuiEvent(DCGUI_EXIT_OK,GetList)} ; // izlaz sa Esc sa
prihvatanjem izmena
MESSAGE "Izlaz - taster ESC" // zahteva: DCGETOPTIONS
NOESCAPEKEY ;

DCGETOPTIONS ICON 1;
NOESCAPEKEY NOMINBUTTON NOMAXBUTTON;
SAYFONT "10.Verdana" GETFONT "11.Consolas Bold";
COLORGETS { { GRA_CLR_DEFAULT, GRA_CLR_WHITE },{ GRA_CLR_DEFAULT,
GraMakeRGBColor({235,232,247}) } } ;

DCREAD GUI ;
OPTIONS GetOptions FIT;
TITLE LNG_MSG(_EDIT_) ;
PARENT @oDlg ;
EVAL {|o| SETAPPWINDOW(o)} MODAL

CLEAR TYPEAHEAD // vraca fokus na prethodni objekat
RETURN nil

*****
STATIC FUNCTION CH_file()
*****
LOCAL radno:=SELECT()
* STOP("For developer only - Samo za programera",0)

LOCAL ctxt := gde_exe()+"\\__LANGUAGES.CH"
DELETE FILE (ctxt)
SET PRINTER TO (ctxt)
SET PRINT ON
SET CONSOLE OFF
SET MARGIN TO 2

? "// ====="
? "// LANGUAGES.CH // START"
? "// ====="
? "// www.cobasystems.com and Alaska Xbase++ 2. and eXpress++ 2.0"

```

```

? "// * Contents of LANGUAGES.CH file that links to project "+appname()
? "// * sa programima: LANGUAGES.PRG, i __LANGUAGES.PRG"
? "// Sadržaj fajla LANGUAGES.CH koji se linkuje u projekat "+appname()
? "// with programs: LANGUAGES.PRG, and __LANGUAGES.PRG"
? " "
? " "

GO TOP
DO WHILE .NOT. EOF()

    if CODE_=300
    ? " "
    ? "// APP: "+appname()
    ? " "
    ENDIF

    ? "#define "+MARK_+" "+padl(CODE_,7) + " // "+alltrim(ENGLISH_)+ " //
"+alltrim(LOCALE_)

SKIP
ENDDO
GO TOP
? " "
? "// "+DTOC( DATE())
? " "
? "// ===== "
? "// LANGUAGES.CH // END "
? "// ===== "

SET PRINTER TO
SET PRINT OFF
SET CONSOLE ON
SET MARGIN TO 0

RunShell(cTxt,"NOTEPAD.EXE")

SELECT(radno)
RETURN NIL

*****
STATIC FUNCTION help_programa()
*****
pdf:=gde_exe()+"\LANGUAGES.PDF"
// or "www.cobasystems.com/help/LANGUAGES.PDF"
dc_spawnurl(pdf) // eXpres++
RETURN NIL

```

* FILE: __LANGUAGE.PRG

```
////////////////////////////////////
//
//
//  __LANGUAGES.PRG
//
//  06-02-2024
//
//  www.cobasystems.com --- COBA Systems --- Slobodan Stanojević Coba //
//  Open Source Project BAST Business Account Software Technology //
//  www.Alaska-Software.com --- Alaska Xbase++ version 2.0.1503 //
//  www.Donnay-software.com --- eXpress++ version 2.0.268 //
//  Sergej Spirin --- FastReport for Xbase++ version 27.03.2015 //
//
//  Database Server PostgreSQL version 9.4.4. //
//
//
////////////////////////////////////
```

```
/*
Za izradu ovog programa korišćen je kod koji je Roger Donnay dao
u svojim bibliotekama eXpress++ 2.0 build 268
The code provided by Roger Donnay was used to create this program
in all eXpress++ 2.0 build 268 libraries
www.donnay-software.com
```

```
-----
Program...: _DCLANG.PRG
Author...: Roger Donnay
Notice...: (c) DONNAY Software Designs 1987-2002
Date.....: Jan 31, 2001
Notes....: Language Functions
```

```
Functions: dc_langblock(), dc_langcustom()
           dc_langset(),   dc_langmsg()
```

```
-----
FUNCTION LNG_SET() <---- dc_langset() // Roger Donnay
FUNCTION LNG_MSG() <---- dc_langmsg() // Roger Donnay + Coba
FUNCTION dc_langblock ( bBlock )      // Roger Donnay
FUNCTION dc_langcustom( bBlock )      // Roger Donnay
FUNCTION create_language_list(LNGFILE) // Coba
FUNCTION fill_language_list(LNGFILE)  // Coba
za rad ovih funkcija neophodni su fajlovi:
LANGUAGES.CH // Coba
LANGUAGES.DBF // Coba
```

```
*/
```

```
//-----
// LANGUAGES.CH
// SADRŽI <SYMBOLIC CONSTANTS> I NJIHOVE <RESULTS> NUMERIČKE VREDNOSTI
// I ZA SVAKU APLIKACIJU JE OVAJ <LANGUAGES.CH> SA RAZLIČITIM SADRŽAJEM.
// U NJEMU SE NE SME NIŠTA MENJATI JER JE SVE PREKO <RESULTS> POVEZANO
```

```
// SA PODACIMA IZ FAJLA <LANGUAGES.DBF> KOJI SADRŽI TEKSTOVE IZ PROGRAMA
// KOJI SE MOGU PRIKAZATI U DVA JEZIKA:
//          DCLANG_ENGLISH // engleski jezik
//          DCLANG_LOCALE  // korisnikov lokalni jezik
// TEKSTOVE ZA DCLANG_LOCALE U DBF UPISUJE I MENJA SAM KORISNIK PROGRAMA

// LANGUAGES.CH
// CONTAINS <SYMBOLIC CONSTANTS> AND THEIR <RESULTS> NUMERIC VALUES
// AND FOR EACH APPLICATION THERE IS THIS <LANGUAGES.CH> WITH DIFFERENT CONTENTS.
// NOTHING MUST BE CHANGED IN IT BECAUSE EVERYTHING IS CONNECTED THROUGH <RESULTS>
// WITH DATA FROM THE FILE <LANGUAGES.DBF> WHICH CONTAINS THE TEXTS FROM THE PROGRAM
// WHICH CAN BE DISPLAYED IN TWO LANGUAGES:
//          DCLANG_ENGLISH // English language
//          DCLANG_LOCALE  // user's local language
// TEXTS FOR DCLANG_LOCALE IN DBF ARE WRITE AND CHANGED BY THE USER OF THE PROGRAM
//-----
#include "LANGUAGES.CH"

#include "dcdialog.ch"
#include "XBTSYS.CH"
//// #pragma Ansi2Oem(OFF)
//// #pragma Oem2Ansi(ON)
```

```
STATIC sbLangBlock := NIL, saLanguage, sbLangCustom
```

```
*****
FUNCTION LNG_MSG( nMessage )
*****
```

```
LOCAL nFound, cMessage, aLanguage
```

```
*****
```

```
IF Valtype(sbLangBlock) = 'B'
```

```
*****
```

```
IF Empty(saLanguage)
```

```
    LNG_SET(applanguage) // PUBLIC applanguage = "ENG" or "LOC"
```

```
ENDIF
```

```
nFound := AScan( saLanguage, {|a|a[1]==nMessage} )
```

```
IF nFound > 0
```

```
    cMessage := saLanguage[nFound,2]
```

```
ELSE
```

```
    cMessage := ""
```

```
ENDIF
```

```
cMessage := Eval(sbLangBlock,cMessage,nMessage)
```

```
RETURN cMessage
```

```
*****
```

```
ELSEIF Empty(saLanguage)
```

```
*****
```

```
    LNG_SET(applanguage) // PUBLIC applanguage = "ENG" or "LOC"
```

```
*****
```

```
ENDIF
```

```
IF Valtype( nMessage ) # 'N'
    RETURN "" // VRATI TEKST PORUKE KAO PRAZAN STRING
ENDIF
```

***** if everything is fine / ako je sve u redu *****

```
nFound := AScan( saLanguage, {|a|a[1]==nMessage} )
IF nFound > 0
    RETURN saLanguage[nFound,2] // VRATI TEKST PORUKE
ELSE
ENDIF

// AKO NIJE NAĐEN TRAŽENI KOD JEZIK SE POSTAVLJA NA ENGLSKI
// JER SE SMATRA DA U TOM DEFAULT JEZIKU TAJ KOD MORA DA POSTOJI
// PA SE PONOVO TRAĆI TAJ KOD
LNG_SET(applanguage,.f.,@aLanguage) // PUBLIC applanguage = "ENG" or "LOC"
nFound := AScan( aLanguage, {|a|a[1]==nMessage} )

IF nFound > 0
    RETURN aLanguage[nFound,2] // VRATI TEKST PORUKE
ELSE
ENDIF

// AKO SE I SADA U ENGLSKOM JEZIKU NE PRONAĐE ZADATI KOD
// FUNKCIJA KAO TEKST PORUKE VRAĆA PRAZAN STRING
RETURN ""
```

```
FUNCTION LNG_SET( applanguage, lSet, aLanguage )
*****
// PUBLIC snLanguage := applanguage // "ENG" or "LOC"
LOCAL nOldLanguage := snLanguage // "ENG" or "LOC"
LOCAL xcod, xeng, xloc

DEFAULT lSet := .t.

IF Valtype(applanguage) # 'C'
    RETURN snLanguage
ELSEIF lSet
    snLanguage := applanguage
ENDIF
```

* --- Coba izmene - Coba changes --- start

```
SET CHARSET TO ANSI
PRIVATE radno:=SELECT()
```

* -----

```
* gde_exe() -> strtran( appname(.t.),"\"+appname() )
DIRMAKE( gde_exe()+"\DBF") // XbToolsIII++
```



```

LNGFILE := gde_exe()+"\DBF\LANGUAGES.DBF"
IF FILE(LNGFILE)==.f.
    create_language_list(LNGFILE)
ENDIF
* -----

// Preuzimanje podataka iz LANGUAGES.DBF u array aLANGUAGE
// Download data from LANGUAGES.DBF to array aLANGUAGE
USE (LNGFILE) NEW SHARED ALIAS "LNG" VIA "DBFNTX"
* VIA "DBFNTX" = je obavezno kada se radi sa DbeSetDefault("PGDBE")
* VIA "DBFNTX" = is required when working with DbeSetDefault("PGDBE")

    IF NetErr()
        SELECT(radno)
        MsgBox(LNGFILE+chr(13)+LNG_MSG(_NET_), "Stop")
        RETURN .F.
    ENDIF

// formiraj array iz dbf podataka: numerik code + string text ENGLISH_ i LOCALE_
// form array from dbf data: numeric code + string text ENGLISH_ and LOCALE_
*****
aLanguage := {}
*****
* ako aLanguage nije postavljeno na aLanguage := {}
* dolazi do greške: Erroir BASE 10/25
*           Description: Parameter has a wrong data type
*           Operation: aAdd
GO TOP
DO WHILE .NOT. EOF()

    xcod:=LNG->CODE_
    xeng:=alltrim(LNG->ENGLISH_)
    xloc:=alltrim(LNG->LOCALE_)

    *---test
    *stop( xcod, TYPE("xcod"),;
    *      xeng, TYPE("xeng"),;
    *      xloc, TYPE("xloc"),;
    *      1)
    *---test

// IF nLanguage = 1
IF applanguage = "ENG"
    AAdd( aLanguage, { xcod, xeng } ) // , LNG->MARK_, } )
ELSE
    AAdd( aLanguage, { xcod, xloc } ) // , LNG->MARK_, } )
ENDIF

SKIP
ENDDO
SELECT "LNG";USE
SELECT(radno)

*--- test

```

```

* xx:=""
* for i=1 to len(aLanguage)
*   xx:=xx+var2char(aLanguage[i])+chr(13)+chr(10)
* next i
* dc_memoedit(xx)
* dc_arrayview(aLanguage)
* --- test

* --- Coba izmene - Coba changes --- end
  IF lSet
    saLanguage := AClone(aLanguage)    // copy aLanguage to saLanguage
  ENDIF
RETURN nOldLanguage

*****
FUNCTION dc_langblock ( bBlock )
*****
LOCAL bOldBlock := sbLangBlock

IF Valtype(bBlock) = 'B'
  sbLangBlock := bBlock
ENDIF

RETURN bOldBlock

*****
FUNCTION dc_langcustom( bBlock )
*****
LOCAL bOldBlock := sbLangCustom

IF Valtype(bBlock) = 'B'
  sbLangCustom := bBlock
ENDIF

RETURN bOldBlock

* Coba:
* FUNCTION create_language_list(LNGFILE)
* FUNCTION fill_language_list(LNGFILE)

*****
FUNCTION create_language_list(LNGFILE)
*****
* gde_exe() -> strtran( appname(.t.), "\"+appname() )
* DIRMAKE( gde_exe()+"\DBF")
* LNGFILE := gde_exe()+"\DBF\LANGUAGES.DBF"

LOCAL radno:=SELECT(), aStructure := {}
SELECT 0
  aStructure := { ;
    { "CODE_"      , "N",    7, 0 }, ;
    { "MARK_"      , "C",   30, 0 }, ;

```

```

        { "ENGLISH_"      , "C", 120, 0 }, ;
        { "LOCALE_"      , "C", 120, 0 } ;
    }
    DbCreate( LNGFILE, aStructure, "DBFNTX" )
    USE (LNGFILE) NEW SHARED ALIAS "LNG"
    nCount:=reccount()
    SELECT "LNG";USE

    IF RECCOUNT()=0
        fill_language_list(LNGFILE) // default language in LANGUAGES.DBF
    ENDIF

SELECT(radno)
RETURN NIL

*****
STATIC FUNCTION fill_language_list(LNGFILE)
*****
* gde_exe() -> strtran( appname(.t.),"\"+appname() )
* DIRMAKE( gde_exe()+"\DBF")
* LNGFILE := gde_exe()+"\DBF\LANGUAGES.DBF"

LOCAL radno:=SELECT()

    USE (LNGFILE) NEW SHARED ALIAS "LNG" VIA "DBFNTX"
    * VIA "DBFNTX" = je obavezno kada se radi sa DbeSetDefault("PGDBE")
    * VIA "DBFNTX" = is required when working with DbeSetDefault("PGDBE")
    IF NetErr()
        MsgBox(LNGFILE+chr(13)+LNG_MSG(_NET_), "Stop")
        RETURN .F.
    ENDIF

* Ovde polje MARK_ sadrži naziv numeričke varijable kao string,
* Ovaj string naziv služi samo za bolje snalaženje - kako bi se korisnik
* snašao kod popunjavanja dbf liste poruka. Recno() je redni broj poruke
* odnosno redni broj člana array niza koji se dobija iz ove dbf
*
* Polje CODE_ sadrži numerički kod poruke a polje TEXT_ sadrži tekst poruke
* i ova sva polja se prebacuju u array niz koji se koristi od strane aplikacije
* za prevođenje teksta na zadati jezik
* ---
* Here the field MARK_ contains the name of the numeric variable as a string,
* This string name is only for better navigation - so that the user
* figured out how to populate the dbf message list. Line() is the sequence number of
the message
* that is, the sequence number of the member of the array string that is obtained from
this dbf
*
* The field CODE_ contains the numerical code of the message and the field TEXT_
contains the text of the message
* and all these fields are transferred to an array used by the application
* to translate the text into the given language

```

```
// SEKCIJA A:
// -----
// Osnovne SIMBOLIČKE KONSTANTE i njihov RESULT COD (numerička vrednost)
// koje se koriste u svakoj poslovnoj CSYSTEMS aplikaciji:
//
// Basic SYMBOLIC CONSTANTS and their RESULT COD (numeric value)
// which are used in every business CSYSTEMS application:

APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_OK_",           ENGLISH_
WITH "OK" , LOCALE_ WITH "OK"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_CANCEL_",       ENGLISH_
WITH "Cancel" , LOCALE_ WITH "Odustani"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_ABORT_",         ENGLISH_
WITH "Abort" , LOCALE_ WITH "Prekini"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_HELP_",          ENGLISH_
WITH "Help" , LOCALE_ WITH "Pomoć"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_WAIT_",          ENGLISH_
WITH "Wait, operation is in progress..." , LOCALE_ WITH "Sačekaj operacija u
toku..."
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_YES_",           ENGLISH_
WITH "Yes" , LOCALE_ WITH "Da"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_NO_",            ENGLISH_
WITH "No" , LOCALE_ WITH "Ne"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_EXIT_",          ENGLISH_
WITH "Exit" , LOCALE_ WITH "Izlaz"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_PRINT_",         ENGLISH_
WITH "Print" , LOCALE_ WITH "Štampaj"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_EXECUTE_",       ENGLISH_
WITH "Execute" , LOCALE_ WITH "Izvrši"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_RESULTS_",       ENGLISH_
WITH "Results" , LOCALE_ WITH "Rezultat"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_USER_",          ENGLISH_
WITH "User" , LOCALE_ WITH "Korisnik"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_PASSWORD_",      ENGLISH_
WITH "Password" , LOCALE_ WITH "Lozinka"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_CREATE_",        ENGLISH_
WITH "Create" , LOCALE_ WITH "Kreiraj"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_NEW_",           ENGLISH_
WITH "New" , LOCALE_ WITH "Novo"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DEL_",           ENGLISH_
WITH "Del" , LOCALE_ WITH "Briši"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_SAVE_",          ENGLISH_
WITH "Save" , LOCALE_ WITH "Sačuvaj"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_EDIT_",          ENGLISH_
WITH "Edit" , LOCALE_ WITH "Izmeni"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_FINDNAME_",      ENGLISH_
WITH "Find name" , LOCALE_ WITH "Nađi naziv"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_FINDCODE_",      ENGLISH_
WITH "Find code" , LOCALE_ WITH "Nađi kod"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_FINDTEXT_",      ENGLISH_
WITH "Text to find" , LOCALE_ WITH "Nađi tekst"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_FINDDATE_",      ENGLISH_
WITH "Find date" , LOCALE_ WITH "Nađi datum"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_FINDCATALOG_", ENGLISH_
WITH "Find catalog" , LOCALE_ WITH "Nađi katalog"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_FINDBARCODE_", ENGLISH_
WITH "Find barcode" , LOCALE_ WITH "Nađi barkod"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_FINDLINK_", ENGLISH_
WITH "Find link" , LOCALE_ WITH "Nađi vezu"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_FINDMARK_", ENGLISH_
WITH "find mark" , LOCALE_ WITH "Nađi oznaku"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_FINDNUMBER_", ENGLISH_
WITH "Find number" , LOCALE_ WITH "Nađi broj"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_NOTFOUND_", ENGLISH_
WITH "Not found" , LOCALE_ WITH "Nije nađeno"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_FOUND_", ENGLISH_
WITH "Found" , LOCALE_ WITH "Nađeno je"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DAY_", ENGLISH_ WITH "Day",
LOCALE_ WITH "Dan"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_WEEK_", ENGLISH_ WITH
"Week", LOCALE_ WITH "Nedelja"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_MONTH_", ENGLISH_ WITH
"Month", LOCALE_ WITH "Mesec"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_YEAR_", ENGLISH_ WITH
"Year", LOCALE_ WITH "Godina"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_MONTH1_", ENGLISH_ WITH
"January", LOCALE_ WITH "Januar"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_MONTH2_", ENGLISH_ WITH
"February", LOCALE_ WITH "Februar"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_MONTH3_", ENGLISH_ WITH
"March", LOCALE_ WITH "Mart"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_MONTH4_", ENGLISH_ WITH
"April", LOCALE_ WITH "April"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_MONTH5_", ENGLISH_ WITH
"May", LOCALE_ WITH "Maj"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_MONTH6_", ENGLISH_ WITH
"June", LOCALE_ WITH "Juni"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_MONTH7_", ENGLISH_ WITH
"July", LOCALE_ WITH "Juli"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_MONTH8_", ENGLISH_ WITH
"August", LOCALE_ WITH "Avgust"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_MONTH9_", ENGLISH_ WITH
"September", LOCALE_ WITH "Septembar"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_MONTH10_", ENGLISH_ WITH
"October", LOCALE_ WITH "Oktobar"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_MONTH11_", ENGLISH_ WITH
"November", LOCALE_ WITH "Novembar"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_MONTH12_", ENGLISH_ WITH
"December", LOCALE_ WITH "Decembar"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DAY1_", ENGLISH_ WITH
"Sunday", LOCALE_ WITH "Nedelja"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DAY2_", ENGLISH_ WITH
"Monday", LOCALE_ WITH "Ponedeljak"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DAY3_", ENGLISH_ WITH
"Tuesday", LOCALE_ WITH "Utorak"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DAY4_", ENGLISH_ WITH
"Wednesday", LOCALE_ WITH "Sreda"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DAY5_", ENGLISH_ WITH
"Thursday", LOCALE_ WITH "Cetvrtak"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DAY6_", ENGLISH_ WITH
"Friday", LOCALE_ WITH "Petak"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DAY7_", ENGLISH_ WITH
"Saturday", LOCALE_ WITH "Subota"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_toDAY_", ENGLISH_ WITH
"Today", LOCALE_ WITH "Danas"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DIRYES_", ENGLISH_ WITH
"Choose a Directory", LOCALE_ WITH "Izaberi direktorijum-folder"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DIRNO_", ENGLISH_ WITH
"Invalid Drive or Directory", LOCALE_ WITH "Nema drajva ili direktorija"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_FILENAME_", ENGLISH_ WITH
"File name", LOCALE_ WITH "Naziv fajla"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_FILEYES_", ENGLISH_ WITH
"File exists", LOCALE_ WITH "Fajl postoji"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_FILENO_", ENGLISH_ WITH
"File not exists", LOCALE_ WITH "Fajl ne postoji"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DBYES_", ENGLISH_ WITH
"Database exists", LOCALE_ WITH "Databaza postoji"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DBNO_", ENGLISH_ WITH
"Database not exists", LOCALE_ WITH "Databaza ne postoji"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_CALC_", ENGLISH_ WITH
"Calculator", LOCALE_ WITH "Kalkulator"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_RANGE_", ENGLISH_ WITH
"Valid Range is", LOCALE_ WITH "Dozvoljeni rang je"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DESCRIPT_", ENGLISH_ WITH
"Description", LOCALE_ WITH "Opis"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_WORKING_", ENGLISH_ WITH
"Working", LOCALE_ WITH "U radu"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_PLEASEWAIT_", ENGLISH_ WITH
"Please wait", LOCALE_ WITH "Molim sačekajte"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_NETWORK_", ENGLISH_ WITH
"Busy metwork", LOCALE_ WITH "Zauzeto u mreži"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_ERROR_", ENGLISH_ WITH
"Error", LOCALE_ WITH "Greška"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_CHOOSE_", ENGLISH_ WITH
"Choose", LOCALE_ WITH "Izaberi"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DOCYES_", ENGLISH_ WITH
"Document exists", LOCALE_ WITH "Dokument postoji"
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_DOCNO_", ENGLISH_ WITH
"Document not exists", LOCALE_ WITH "Dokument ne postoji"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_EXISTYES_", ENGLISH_ WITH  
"Exists", LOCALE_ WITH "Postoji"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_EXISTNO_", ENGLISH_ WITH  
"Not exists", LOCALE_ WITH "Ne postoji"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_START_", ENGLISH_ WITH  
"Start", LOCALE_ WITH "Početak"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_END_", ENGLISH_ WITH "End",  
LOCALE_ WITH "Kraj"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_LOCALE_", ENGLISH_ WITH "Set  
language to locale", LOCALE_ WITH "Postavi jezik na lokalni"
```

```
APPEND BLANK ; REPLACE CODE_ WITH recno() , MARK_ WITH "_ENGLISH_", ENGLISH_ WITH  
"Set language to english", LOCALE_ WITH "Postavi jezik na engleski"
```

```
*****
```

```
// SEKCIJA B:
```

```
// -----
```

```
// Osnovne SIMBOLIČKE KONSTANTE i njihov RESULT COD (numerička vrednost)
```

```
// koje se koriste samo u ovoj poslovnoj CSYSTEMS aplikaciji:
```

```
//
```

```
// Basic SYMBOLIC CONSTANTS and their RESULT COD (numeric value)
```

```
// which are only used in this business CSYSTEMS application:
```

```
APPEND BLANK ; REPLACE CODE_ WITH 300 , MARK_ WITH "_APPNAME_", ;
```

```
ENGLISH_ WITH "LANGUAGE SETTING :: ENGLISH and LOCALE" ,;
```

```
LOCALE_ WITH "POSTAVKA JEZIKA :: ENGLESKI i LOKALNI"
```

```
APPEND BLANK ; REPLACE CODE_ WITH 301 , MARK_ WITH "_ENG_",;
```

```
ENGLISH_ WITH "ENGLISH",;
```

```
LOCALE_ WITH "ENGLESKI"
```

```
APPEND BLANK ; REPLACE CODE_ WITH 302 , MARK_ WITH "_LOC_",;
```

```
ENGLISH_ WITH "LOCALE" ,;
```

```
LOCALE_ WITH "LOKALNI"
```

```
*****
```

```
COMMIT
```

```
SELECT "LNG";USE
```

```
SELECT(radno)
```

```
RETURN .T.
```


APPENDIX

LANGUAGES.ZIP file with all LANGUAGES.XPJ project files

PRILOG

Fajl LANGUAGES.ZIP sa svim fajlovima projekta LANGUAGES.XPJ

CONCLUSION

This would be all about one method, out of the many existing methods, to work with multiple languages in one business application.

My point of view that an application should have English as its base language, and as a local language only one language that the user of the application speaks and that the user can change, may be controversial for some. In that case, different solutions are possible in this technology of mine, as well as with other software solutions. But one thing is a fact: this is a very big and tiring job and few people start it without a great and justified need. Somewhere on the eXpress forum, Tom once said about that job: **"but this is really a monkey job"**

<http://bb.donnay-software.com/Donnay/viewtopic.php?f=9&t=3191&p=19366&hilit=language#p19366>

ZAKLJUČAK

Ovo bi bilo sve o jednom metodu, od brojnih postojećih metoda, za rad sa više jezika u jednoj poslovnoj aplikaciji.

Moje stanovište da jedna aplikacija treba da ima kao bazni jezik engleski jezik, a kao lokalni jezik samo jedan jezik kojim govori korisnik aplikacije i koji taj korisnik može da menja, može da bude za nekoga sporno. U tom slučaju moguća su drugačija rešenja i u ovoj mojoj tehnologiji, kao i sa drugim programskim rešenjima. Ali jedna stvar je činjenica: ovo je jako veliki i naporan posao i malo ko ga bez velike i opravdane potrebe započinje. Negde na eXpress forumu jednom za taj posao reče Tom: **"ali ovo je stvarno majmunski posao"**

<http://bb.donnay-software.com/Donnay/viewtopic.php?f=9&t=3191&p=19366&hilit=language#p19366>

07.02.2024

