

HMG

Ovo je samo mali deo iskustva koja mogu preneti drugima koji žele da koriste HMG

Nije lako ali вреди

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This is just a small part of the experience that can be transferred to others who want to use HMG

It is not easy but it's worth

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Before start

Ako ste koristili Clipper onda ste mnogo puta poželili da napišete pravi Windows program. Ima mnogo mogućnosti za to ali nijedna nije laka.

Da se razumemo na početku, Windows ima svoja pravila za pisanje programa koja se moraju poštovati, to je dobro, ali Clipper je toliko jednostavan da prelazak nije lak

Za početak, navikli ste na ekran 80 karaktera u 24 reda, nema više ali ni manje.

Windows drugačije definiše ekran, jedinica je tačkica na ekranu (pixel) tako da program može da piše/crta na celom ekranu.

Da vidimo jedan jednostavan Clipper program

```
CLS
```

```
n1 = 2
```

```
n2 = 2
```

```
@ 10,10 GET N1 PICTURE '999'
```

```
@ 10,15 SAY '+'
```

```
@ 10,20 GET N2 PICTURE '999'
```

```
@ 10,25 SAY '='
```

```
READ
```

```
n3 = n1 + n2
```

```
@ 10,30 GET N3 PICTURE '9999'
```

```
INKEY(5)
```

```
RETURN
```

Napravite kompilaciju i imate program koji sabira dva broja. Na početku briše ekran, definiše dva broja (N1 i N2), nacrtava znak sabiranja i jednakosti. Kad pokrenete

If you used the Clipper then you have many times wanted to write a true Windows program. There are many possibilities for this, but none of them easy.

To be clear at the outset, Windows has its own rules for writing programs that must be respected, that's good, but Clipper is so easy to move is not easy

For starters, you're used to display 80 characters in 24 lines, no more or no less.

Windows defines the different display, the unit of dots on the screen (pixel) so that the program can write / draw on the entire screen.

Let's see a simple Clipper program

Compile and have program that adds two numbers. At the beginning clears the screen, define two numbers (N1 and N2), draft a sign of addition and equality. When

program uneste prvi sabirak i pritisnete ENTER, unesete drugi sabirak i pritisnete ENTER, i trenutak kasnije vidite zbir. Malo kasnije program će da se zatvori.

Napomena: podrazumeva se da znate da napišete i kompajlirate clipper program

you start the program enter the first addend and press ENTER, enter the second addend and press ENTER, and a moment later see summation. A little later, the program will be closed.

Note: it is assumed that you know to write and compile clipper program

Clipper

Da se podsetimo istorije. Davne 1980. godine pojavio se jedan program nazvan dBase III+

To recap history. Back in 1980, there appeared a program called dBase III +

<http://en.wikipedia.org/wiki/DBase>

Imao je jednostavan interfejs i solidan programski jezik, podržavao je DBF format za to vreme evolucionaran, u fajlu se čuvala i struktura podataka.

He had a simple interface and solid programming language, supported the DBF format for evolutionary time, the file is stored and data structures.

Bio je interpreter, napiše se komanda i odmah se izvrši. naravno, moglo je da se napiše više komandi i sačuva u fajl i to kasnije izvršava, takav fajl je imao extenziju PRG koja je poznata i danas.

He was the interpreter, write the command and immediately executed. Of course, it could be written more commands and stored in a file and later performend auromatically, such a file had an extension PRG which is known today.

Interpeter je dobar ali se korisniku isporučuje souce kod i to se programerima nije svidelo. Onda se 1985 godine pojavio Clipper, kompajler za dBase programe.

Interpeter is good but the user supplied souce code and it did not like developers. Then in 1985 came Clipper, dBase compiler for programs.

[http://en.wikipedia.org/wiki/Clipper_\(programming_language\)](http://en.wikipedia.org/wiki/Clipper_(programming_language))

Rezultat je bio samostalan EXE fajl koji se isporučivao klijentima. Sorce je ostao kod pogramera, izvršna verzija kod korisnika. Sjajno.

The result was a stand-alone EXE file that is delivered to customers. Sorce stayed at pogramera, executable version of the user. Great.

Najčešće korišćene verzije su Summer 87 i Clipper 5.01. Zadnja verzija je Clipper 5.3b iz 1997

The most commonly used versions of the Clipper Summer 87 and 5.01. The latest version of the Clipper 5.3b in 1997

Pošto je program pisan pažljivo radio je u

Since the program is written carefully

Windows okruženju.

worked in the Windows environment.

Bilo je mnogo pokušaja da se napravi biblioteka koja će dodati windows funkcionalnost.

There have been many attempts to create a library that will add windows functionality.

Harbour

Ono što je nama značajno je Harbour projekat, verzija 3.0 iz 2011 godine

What is important for us is Harbour project, version 3.0 from the year 2011.

[http://en.wikipedia.org/wiki/Harbour_\(software\)](http://en.wikipedia.org/wiki/Harbour_(software))

To je bio pravi windows kompajler za clipper i rezultat je bila windows 32-bit aplikacija

It was a true compiler for windows clipper and the result was windows 32-bit applications

100% kompatibilan clipper kompajler, šta treba više? Uz mnogo windows funkcionalnosti i dalje je rezultat program u text režimu, ekran 80x25 redova i problem je bila štampa na windows-only štampačima

100% compatible clipper compiler, what needs more? With lots of windows many functions and still is the result of a program in text mode, the screen 80x25 lines and the problem was printed on the Windows-only printers

Nije se dugo čekalo na rešenje tih problema

Not long awaited solution to these problems

<https://harbour.github.io/third-party.html>

Ima komercijalnih rešenja ali i besplatnih koja su nama interesantna. Postoje i rešenja za Linux

There are commercial solutions but also free which are interesting for us. There are also solutions for Linux

HMG

Jedno lepo rešenje (skoro) svih problema za prelazak na windows je HMG

One good solution to (almost) all can leave to move on to the windows HMG

<https://sites.google.com/site/hmgweb/>

Koliko god je program dobar, podrška je dobrodošla, HMG ima odličan forum koji prati mnogo ljudi iz celog sveta

No matter how good the program, support is welcome, HMG has an excellent forum that accompanies many people from all

over the world

<http://www.hmgforum.com/>

Tamo ćete naći najnoviju verziju programa

There you will find the latest version of the program

<http://www.hmgforum.com/site/>

Sada je aktuelna verzija 3.3.1 koju trebate skinuti i instalirati. Na kraju instalacije podesite sistemske varijable, dodajte c:\hmg u PATH i definišite HMGPATH=c:\hmg

Now the current version 3.3.1 you need to download and install. At the end of installation, set the system variable, add C:\HMG in the PATH and define HMGPATH = C:\HMG

Instalation

Na kraju instalacije imaćete folder C:\HMG i njemu dosta foldera,

At the end of the installation you will have a folder C:\HMG and its a lot of folders,

DOC – dokumentacija
HARBOUR – harbour kompajler
MINGW – MiniGW kompajler
Notepad++ - odličan editor
IDE – GUI intefejs
SAMPLES – primeri

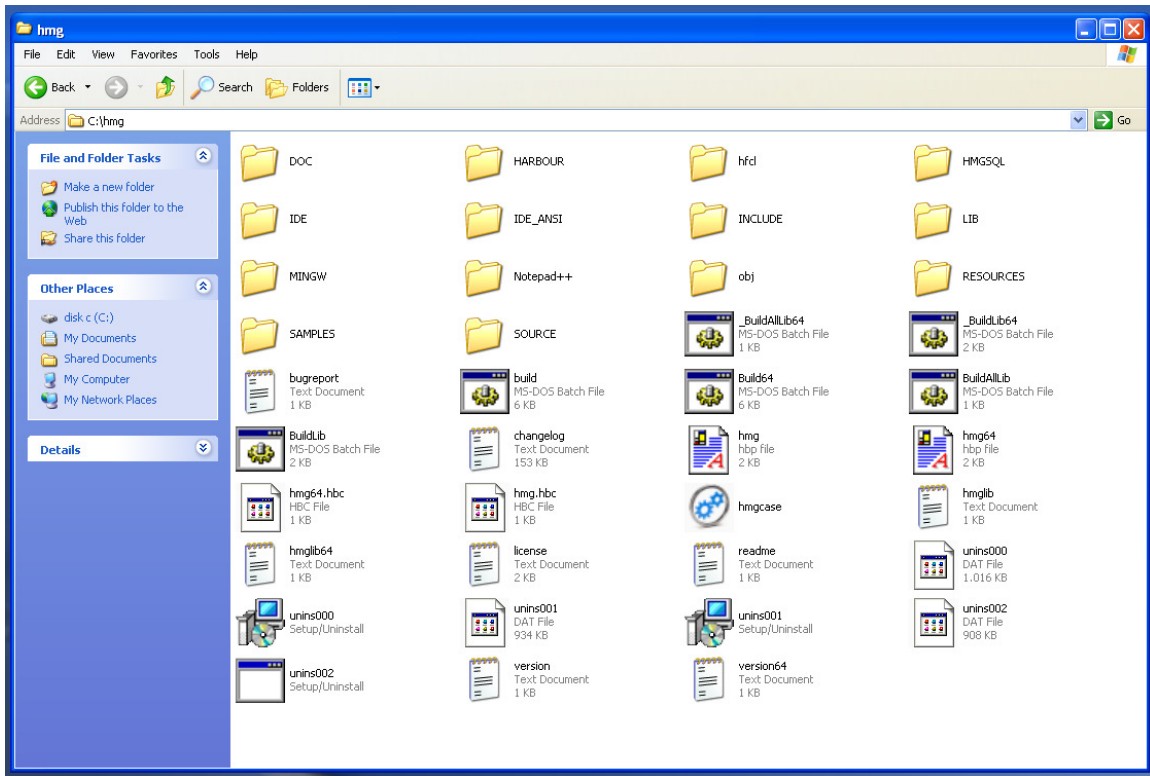
DOC - Documentation
HARBOUR - harbour compiler
MINGW - MiniGW compiler
Notepad ++ - excellent editor
IDE - GUI interface
SAMPLES - examples

Za kompilaciju programa je potrebno pokrenuti BUILD.BAT

For the compilation of the program should be run BUILD.BAT

Nove ekstenzije su
HPB – hmg projekt
RC – resource fajl

New extensions are
HPB - hmg project
RC - resource file



First program

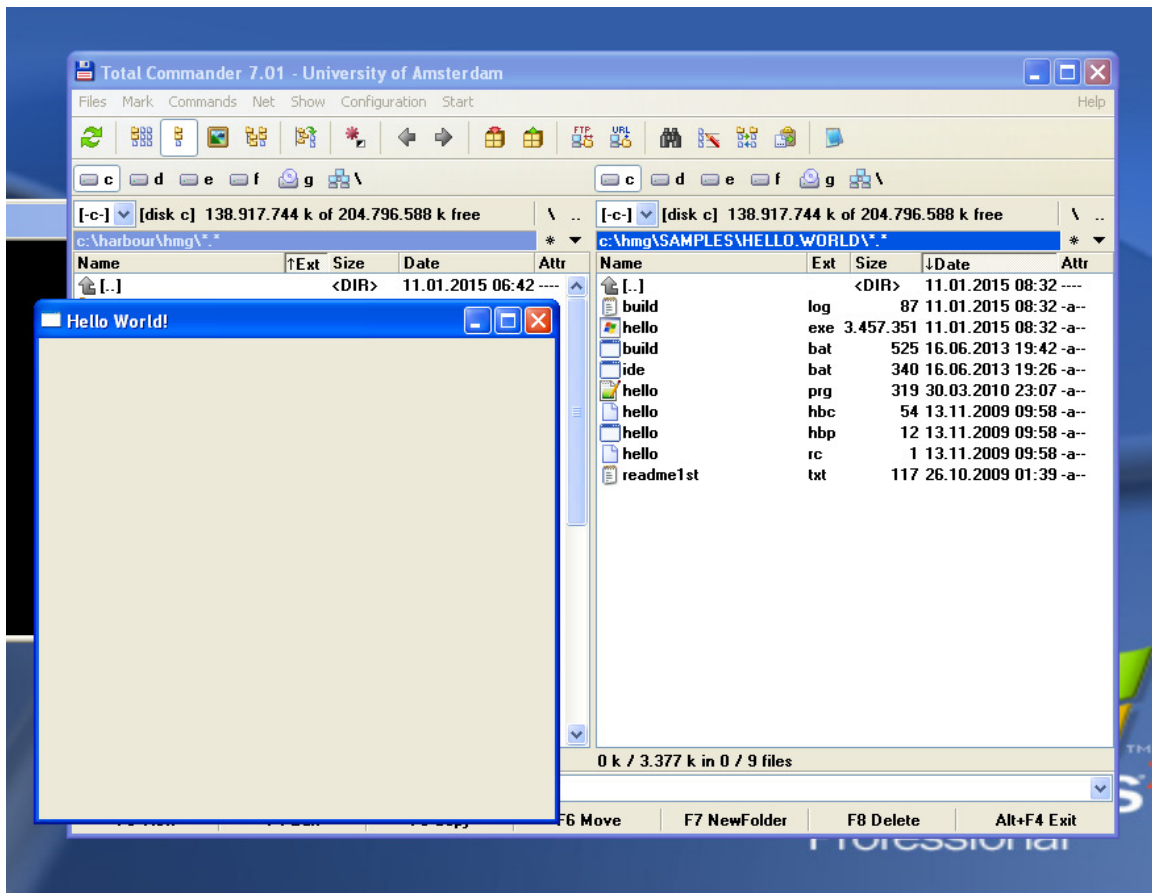
[-c-] [disk c] 138.921.388 k of 204.796.588 k free				
c:\hmg\SAMPLES\HELLO.WORLD*. *				
Name	Ext	Size	↓Date	Attr
[.]		<DIR>	11.12.2013 22:57	----
build	bat	525	16.06.2013 19:42	-a--
ide	bat	340	16.06.2013 19:26	-a--
hello	prg	319	30.03.2010 23:07	-a--
hello	hbc	54	13.11.2009 09:58	-a--
hello	hbp	12	13.11.2009 09:58	-a--
hello	rc	1	13.11.2009 09:58	-a--
readme1 st	txt	117	26.10.2009 01:39	-a--

Klasičan pimer za mnoge programe je HelloWorld koji ćete naći u folderu SAMPLES

A classic example in this for many programs is HelloWorld, which you will find in the folder SAMPLES

Tu imate sve i samo treba ukucati Build hello.prg

There you have it all and just need to type Build hello.prg



Rezultat je odmah vidljiv, pozor na sredini ekrana

The result is immediately visible, set in the middle of the screen

Da vidimo program

To see the program

```
/*
* HMG Hello World Demo
* (c) 2002-2009 Roberto Lopez <mail.box.hmg@gmail.com>
*/
```

```
#include "hmg.ch"
```

```
Function Main
```

```
    DEFINE WINDOW Win_1 ;
        ROW 0 ;
        COL 0 ;
        WIDTH 400 ;
        HEIGHT 400 ;
        TITLE 'Hello World!' ;
        WINDOWTYPE MAIN
```

```

        END WINDOW

        Win_1.Center

        Win_1.Activate

Return

```

Hajde da ga analiziramo

```

/* text */ - ovako se piše komentar
// text - a može i ovako i važi do kraja
red
#include "hmg.ch" - obavezan
include fajl, tamo je definisano sve što
treba

```

Function Main – na početku treba definisati kako se funkcija/procedura zove

```

DEFINE WINDOW Win_1 ;
    ROW 0 ;
    COL 0 ;
    WIDTH 400 ;
    HEIGHT 400 ;
    TITLE 'Hello World!' ;
    WINDOWTYPE MAIN

```

```
// ovde se pišu kontrole
```

END WINDOW – ovo je deo bez koga ne može, mora se definisati glavni prozor, naziv (Win_1), veličina (WIDTH 400 HEIGHT 400), naslov (TITLE 'Hello World! ') i tip (WINDOWTYPE MAIN)

```

// Win_1.Center – ovo je mogućnost
da se program prikazuje centrirano na
ekanu, nije onavezno
Win_1.Activate – ovako se pokreće
prikaz na ekranu

```

Return – standardan zavšetak programa

Let's analyze it

```

/* Text */ - this is how you write a
comment
// Text - and that's the way till end of row
#include "hmg.ch" - necessary include
files, there is a defined everything you need

```

Function Main - at the beginning should be defined as the function / procedure calls

```

DEFINE WINDOW Win_1;
    ROW 0;
    COL 0;
    WIDTH 400;
    HEIGHT 400;
    TITLE 'Hello World!' ;
    WINDOWTYPE MAIN

```

```
// Here to write controls
```

END WINDOW - this is part without which it can not, must define the main window, the name (Win_1), size (WIDTH 400 HEIGHT 400), title (TITLE 'Hello World!') And type (WINDOWTYPE MAIN)

```

// Win_1.Center - this is the possibility that
the program displays centered on the
screen, not necessarily
Win_1.Activate - this is run on-screen
display

```

Return - standard end of program

Compile

Procedura BUILD.BAT služi za kompilaciju programa

Korišćenje:

- (1) build program.prg
- (2) build project.hbp

Uz Clipper ste imali program RMAKE koji je služio za (inkrementalnu) kompilaciju projekta

Ovde nema sličnog programa ali postoji HBP fajl gde ćete nasvesti sve module koje treba kompilirati i povezati u aplikaciju (EXE fajl)

BUILD.BAT procedure used for the compilation of programs

Usage:

- (1) build program.prg
- (2) build project.hbp

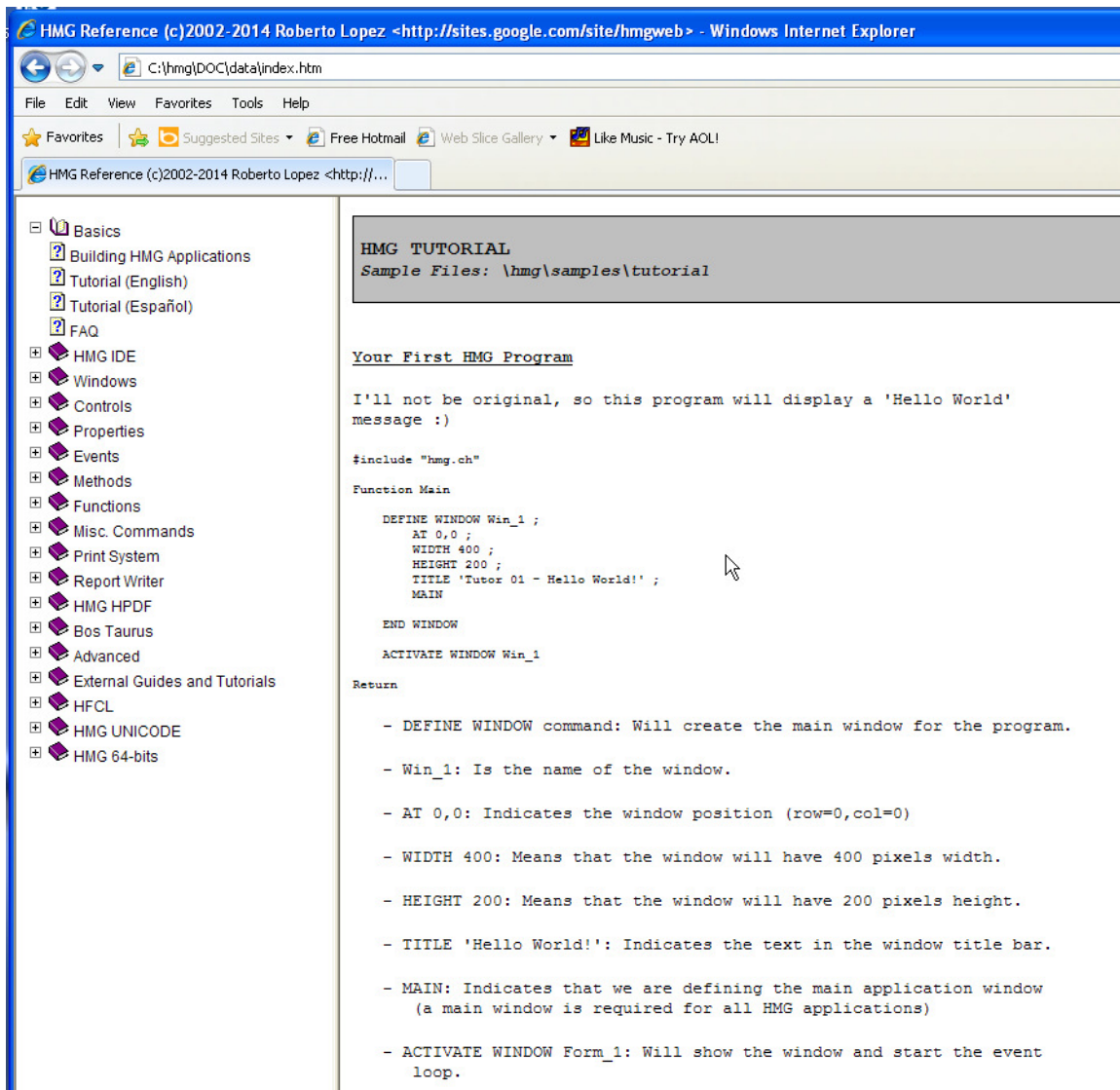
With Clipper've had RMAKE program that was used for (incremental) compilation project

There is no similar program but there HBP file where you list all the modules that should be compiled and linked into the application (EXE file)

Manual

HMG je mnogo toga dodao clipper programu i u početku se nije lako snaći, ali autori su napravili odličan Reference guide koji ćete naći na C:\hmg\DOC\hmgdoc.htm

HMG is a lot added clipper program and initially it is not easy, but the authors did an excellent reference guide, which you will find in C:\HMG\DOC\hmgdoc.htm



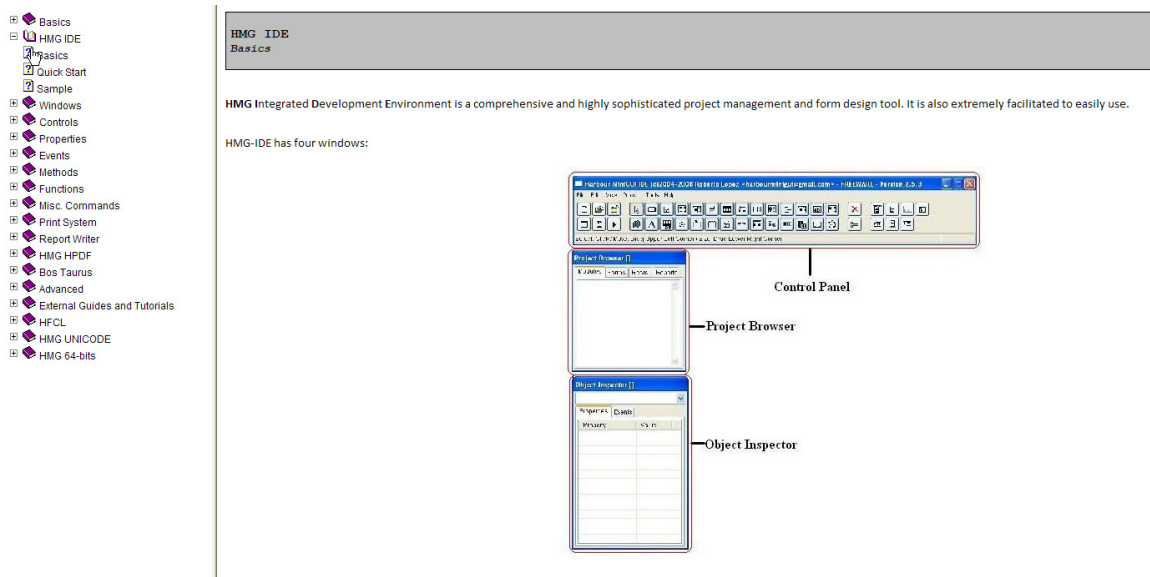
HMG IDE

Autori su se potrudili na naprave program koji će pomoći početnicima, to je HMG IDE koji će Vam pomoći da definišete prozor i postavite kontrole na njega

The authors have made an effort to make a program that will help beginners to the HMG IDE that will help to define the window and set the control to it

Rezultat je (projekt) HBP, (program) PRG i (forma) FRM.

The result is a (project) HBP, (the program) PRG and (form) FRM.



Uputstvo za HMG IDE je kompletno pa možete pročitati i probati kako napraviti jednostavan program

User HMG IDE is complete so you can read it and try to make a simple program

Alat je odličan ali možda zbunjujući za početnika, ja ga retkokoristim

The tool is excellent but maybe confusing for a beginner, I rarely use it

CONTROL Definition

Na raspolaganju imate sve kontrole koje su

There you have all the controls that are

potrebne za program, a možete ih definisati na dva načina

Nemojte se iznenaditi kad u nekom programu vidite definisanje i na jedan i drugi način, to HMG podržava i samo je stvar ukusa šta ćete koristiti

needed for the program, and can be defined in two ways:

Do not be surprised if in a program, see the definition and the one and the other way, that HMG supports only a matter of taste what you use

The screenshot shows the HMG software interface. On the left is a 'Controls' panel with a scrollable list of controls, each preceded by a question mark icon. The controls listed are: This Object, Activex, AnimateBox, Browse, Button, CheckBox, CheckButton, ComboBox, Context Menu, Control Context Menu, DatePicker, DropDown Menu, EditBox, Frame, Grid, HyperLink, Image, IPAddress, Label, ListBox, Main Menu, MonthCalendar, Notify Menu, Player, ProgressBar, RadioGroup, RichEditBox, Slider, Spinner, SplitBox, StatusBar, Tab, TextBox, Timer, TimePicker, Tree, and ToolBar. On the right is a large text area displaying the definition for the 'FRAME' control. At the top, it says '@...FRAME / DEFINE FRAME' and 'Creates a frame control'. Below this, it shows the 'Standard Syntax (xBase Style):' which is a code block starting with '@ <nRow> ,<nCol>' followed by 'FRAME<ControlName>' and a list of optional properties in square brackets: '[OF | PARENT <ParentWindowName>]', '[CAPTION <cCaption>]', 'WIDTH <nWidth>', 'HEIGHT <nHeight>', '[FONT <cFontName>]', '[SIZE <nFontSize>]', '[BOLD]', '[ITALIC]', '[UNDERLINE]', '[STRIKEOUT]', '[BACKCOLOR <aBackColor>]', '[FONTCOLOR <aFontColor>]', and '[TRANSPARENT]'. Below the standard syntax, it shows the 'Alternate Syntax:' which is a code block starting with 'DEFINE FRAME <ControlName>', followed by 'PARENT <ParentWindowName>', 'ROW <nValue>', 'COL <nValue>', 'WIDTH <nValue>', 'HEIGHT <nValue>', 'FONTNAME <cValue>', 'FONTSIZE <nValue>', 'FONTBOLD <lValue>', 'FONTITALIC <lValue>', 'FONTUNDERLINE <lValue>', 'FONTSTRIKEOUT <lValue>', 'CAPTION <cCaption>', 'BACKCOLOR <aBackColor>', 'FONTCOLOR <aFontColor>', 'TRANSPARENT <lValue>', and ending with 'END FRAME'.

@...FRAME / DEFINE FRAME
Creates a frame control

Standard Syntax (xBase Style):

```
@ <nRow> ,<nCol>
  FRAME<ControlName>
  [ OF | PARENT <ParentWindowName> ]
  [ CAPTION <cCaption> ]
  WIDTH <nWidth>
  HEIGHT <nHeight>
  [ FONT <cFontName> ]
  [ SIZE <nFontSize> ]
  [ BOLD ]
  [ ITALIC ]
  [ UNDERLINE ]
  [ STRIKEOUT ]
  [ BACKCOLOR <aBackColor> ]
  [ FONTCOLOR <aFontColor> ]
  [ TRANSPARENT ]
```

Alternate Syntax:

```
DEFINE FRAME <ControlName>
  PARENT <ParentWindowName>
  ROW <nValue>
  COL <nValue>
  WIDTH <nValue>
  HEIGHT <nValue>
  FONTNAME <cValue>
  FONTSIZE <nValue>
  FONTBOLD <lValue>
  FONTITALIC <lValue>
  FONTUNDERLINE <lValue>
  FONTSTRIKEOUT <lValue>
  CAPTION <cCaption>
  BACKCOLOR <aBackColor>
  FONTCOLOR <aFontColor>
  TRANSPARENT <lValue>
END FRAME
```

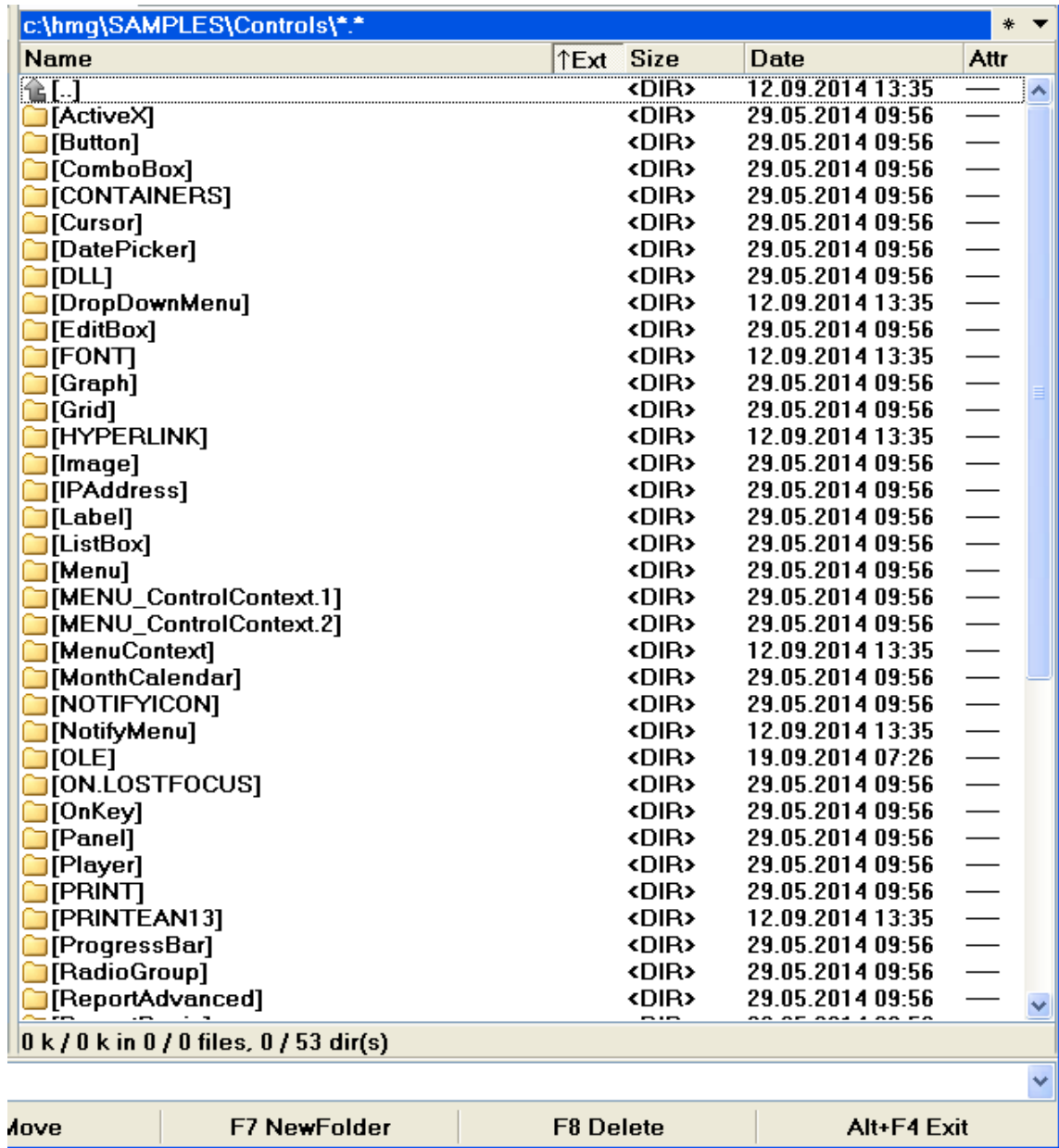
Samples

Primere za sve kontrole ćete naći u folderu
c:\hmg\samples\controls

Examples for all controls will found in the
folder c:\hmg\samples\controls

Probajte i vidite kako izgledaju i kako rade

Try it and see how they look and how they
work



Debug

Clipper ima odlican debugger, a to postoji i kod HMG

Clipper has an excellent debugger, and it exists in HMG

Da to pokrenete potrebno je u programu pozvati funkciju ALTD(), a kompilaciju napraviti sa BUILD /b program.prg

In order to run the program, it is necessary to call a function Altd (), a compilation do with the BUILD / b program.prg

Nije savršeno i mnogo puta mi nije radilo

It's not perfect, and many times we did not work

First HMG program

Na početku smo imali primer Clipper programa koji je sabirao dva broja. Ovo je HMG verzija tog programa

At the beginning, we had an example Clipper program and gather two numbers. This is the version of the program HMG

Primetićete da je definisan glavni prozor, zatim tri TEXTBOX (polja za unos), jedna LABEL (tekst na ekranu) i jedan BUTTON (dugme)

You will notice that defined the MAIN WINDOW, then three TEXTBOX (input fields), one LABEL (text on screen) and one BUTTON (button)

```
#include "hmg.ch"
```

```
Function Main
```

```
// set navigation extended
```

```
    DEFINE WINDOW Form_1 ;  
        AT 0,0 ;  
        WIDTH 640 HEIGHT 480 ;  
        TITLE 'HMG Demo - Add 2 Number' ;  
        MAIN
```

```
    // ON KEY ESCAPE ACTION Form_1.Release
```

```
    @ 100,100 TEXTBOX Num_1 ;  
        VALUE 2 ;  
        NUMERIC ;  
        MAXLENGTH 5 ;  
        RIGHTALIGN ;  
        WIDTH 20
```

```

@ 105,130 LABEL Plus ;
    VALUE ' + ' ;

@ 100,150 TEXTBOX Num_2 ;
    VALUE 2 ;
    NUMERIC ;
    MAXLENGTH 5 ;
    RIGHTALIGN ;
    WIDTH 20

@ 100,200  BUTTON ADD_ING ;
    CAPTION ' = ' ;
    ACTION add_two_number () ;
    WIDTH 30 ;
    HEIGHT 25

@ 100,250 TEXTBOX Num_3 ;
    VALUE 2 ;
    NUMERIC ;
    MAXLENGTH 5 ;
    RIGHTALIGN ;
    WIDTH 30

END WINDOW

Form_1.Center

Form_1.Activate

Return Nil

function add_two_number ()

Form_1.Num_3.Value := Form_1.Num_1.Value +
Form_1.Num_2.Value

Return

```

Za kompilaciju kucajte BUILD
prog_1h.prg i videćete rezultat

For the compilation type BUILD
prog_1h.prg and you will see the result

Za razliku od Clipper u Windows
programima za prelazak na sledeće polje se
izvodi pritiskom na Tab

Unlike Clipper to Windows applications to
move to the next field is performed by
pressing the Tab

Da bi se program ponašao kao u Clipper skinite komentar sa red
SET NAVIGATION EXTENDED
i onda ćete pritiskom na Enter preći na sledeće polje

U Clipper se obično koristi
READ
IF LASTKEY() = 27 // ESC taster
RETURN
...

Ovde toga nema i za izlaz iz programa treba kliknuti na crveni X u gornjem desnom delu prozora

To je podrazumevano ponašanje u Windows okruženju ali postoji mogućnost definisanja akcije za taster (slično kao za dugme) i ako skinete komentar sa reda
KEY ESCAPE ACTION
Form_1.Release
Pritiskom na ESC će program biti završen.

Napomena: pažljivo sa ovim jer se ovako zatvara ceo program a ne prekida neka akcija, to treba definisati drugačije

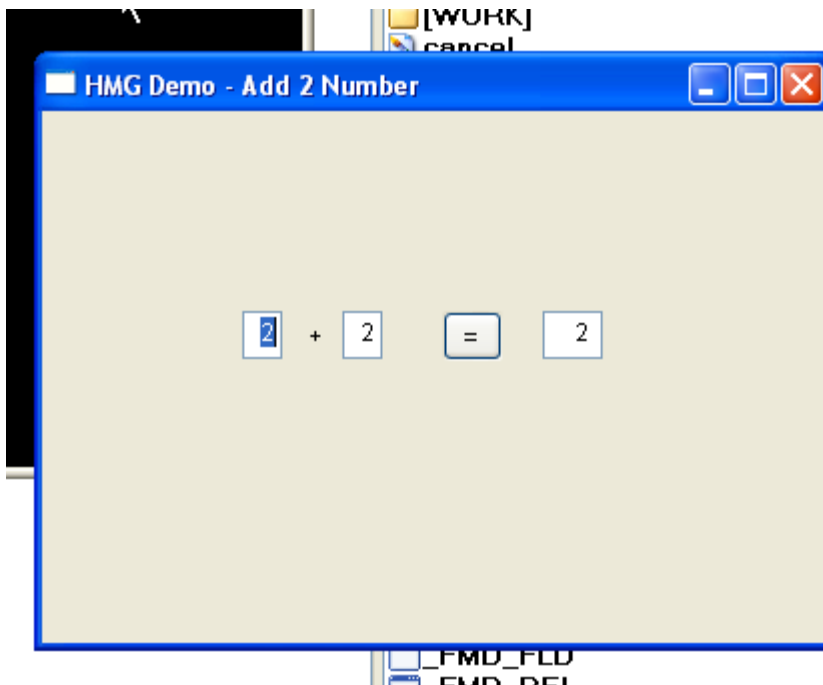
To have acted as a Clipper in order to remove a comment
SET NAVIGATION EXTENDED
and then pressing the Enter move to the next field

The Clipper is usually used
READ
IF LASTKEY () = 27 // ESC
RETURN
...

Here there is not and to exit the program should click on the red X in the upper right part of the window

This is the default behavior in Windows environment, but there is a possibility of defining actions for key (similar to a button), and if you remove the comment to the line
ESCAPE KEY ACTION Form_1.Release
Pressing the ESC program will be completed.

Note: be careful with this because this closes the whole program and not break any action, it should be defined differently



At end

Za sada ovoliko

For now, this

HMG je u svakom slučaju odličan program koji će Vam omogućiti na napravite Windows programe kakve želite

HMG is in any case a great program that will allow you to create Windows programs you want them

Nije lako, ali nije ni teško. Samo treba prihvatiti novi koncept i to je sve

It is not easy, but it is not difficult. You just need to accept a new concept and that's all

Uz HMG i instalaciji imate i Notepad++ programerski ediator, olakšaće Vam svakodnevni rad

With HMG and installation and you have Notepad ++ programming ediator will facilitate your everyday work

Na žalost nije dovoljno samo kompajlirati stare aplikacije, rad DOS i WINDOWS programa je drugačiji i programe treba pisati iznova

Unfortunately, it is not enough just to compile the old applications, working DOS and WINDOWS program is different and programs should be written anew

Ja mislim da вреди

I think it's worth