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GnuCOBOL
A CRUDE APPLICATION



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## 1. Introduction

"CRUDE" applications allow you to create, read, update, and delete indexed file records.

These files have a primary key that never allows duplicates and may have alternative keys that may or may not have duplicates.

They can be master record type files (customer records, suppliers, accounts, materials ...) or any other type, such as transactional (accounting records, invoices issued, purchase orders, stock movements, and so on).

AFAIK, this is the first available example of a CRUDE application on indexed files in GnuCOBOL.

In this example, the CRUDE application manage an INDEXED FILE with a primary key and 3 alternative keys that do not allow duplicate values.

The primary key in this application is a simple 9-digit numerator from 1 onwards without any meaning. It is like a GUID.

This way, you can have keys that can be modified (the alternative keys) without being forced to erase the record and rewrite it as it is mandatory for primary keys that can never be modified.

This TUI tool is also a **fully functional real working application**.

This sample CRUDE tool manages a FILE with master data.

Duplicate these programs, keeping the general logic to manage other customer, supplier, accounts, materials master files or other transactional file files (accounting records, inventory movements, and so on).

**This way you can create virtually any kind of application.**

These files have a similar structure, that is, a primary key with a simple counter and secondary keys according to different needs (codes, descriptions ...).

The application is designed to work and allow in a "multiple companies environment".

In the example we handle more GC71Fxxx.DAT files where "xxx" is a code associated with a certain company code.

This application uses other TUI TOOLS such as MENU, BOX, BOXMEX, DATEPICKER, BUTTONS, YESNO.

The CRUDE application consists of four programs:

1. GC71CRUDEMAIN.cob: displays a cover and manages menus.
2. GC71CRUDESEL.cob : allows multi-company and multi-file management.
3. GC71CRUDEBRO.cob : to browse each of the files. it allows to link GC71CRUDE CUD for creation, edit and delete operations.
4. GC71CRUDECUD.cob : performs both creating and editing and deleting records

The application starts with a GC71CRUDEMAIN Menu with only two options: CREATE and READ (Browse). The Browse program allows selecting a record to be updated or deleted, or creating a new record.

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GC71CRUDEMAIN allows the user to select the Browse or Create function.

In both cases, the GC71CRUDESEL program is called, which allows you to select which file (that is, the company code) and then in turn calls GC71CRUDEBRO to have the records list to browse or the GC71CRUDECUD program for creating a new record.

GC71CRUDEBRO lists the records already in the file. Lets you scroll vertically and horizontally within the file and select a record that is managed in edit or delete from the same program GC71CRUDECUD. You can increase or decrease the amount of scrolling columns with + and - keys.

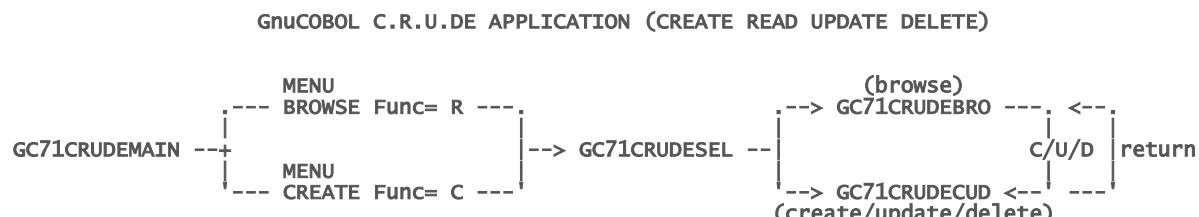
GC71CRUDECUD allows you to create a new record or edit or delete an existing record.

It contains lot of samples on how user input can be managed with various types of fields, mandatory fields, date fields, numeric fields, amount fields. How to decode user input. And it shows various types of controls, and how to link a datepicker to select date for date fields.

It contains examples of how to enter amounts with integer and decimal digits and with a negative sign and how to check it.

It also contains the example of link to have help on fields using the TUI GC74HELPVIEW tool.

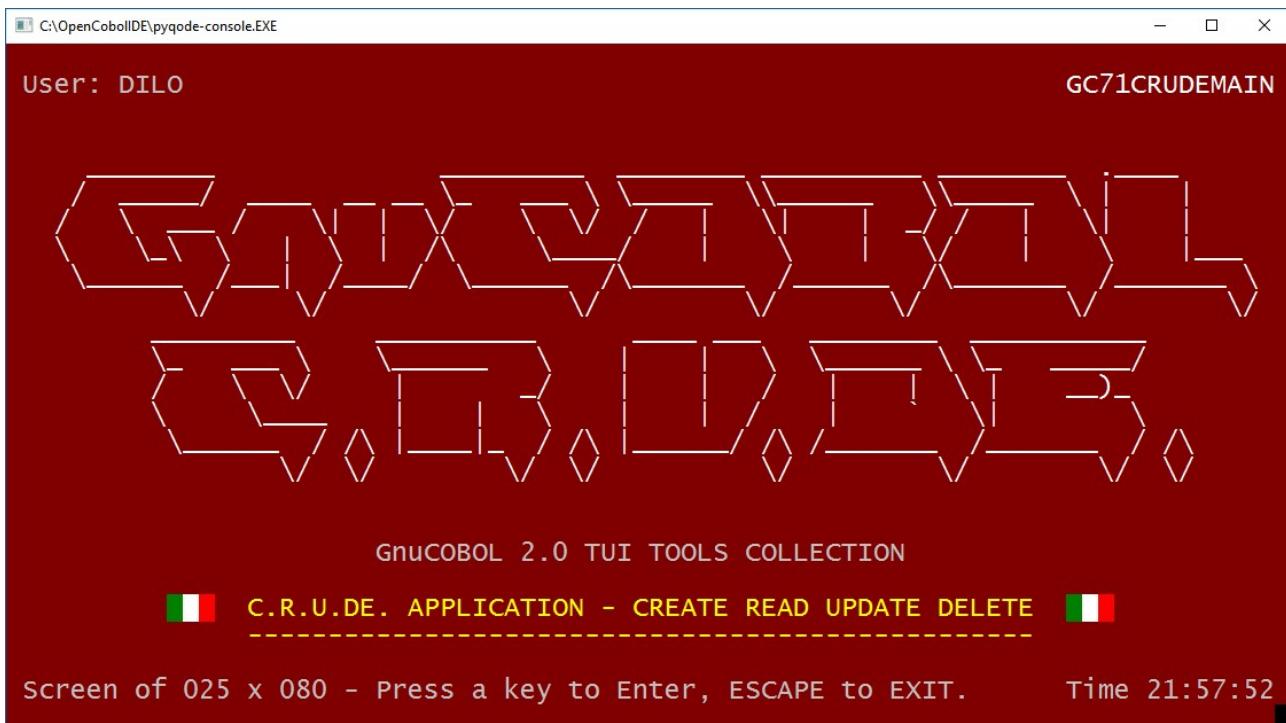
The general operating schema of the CRUDE application is as follows.



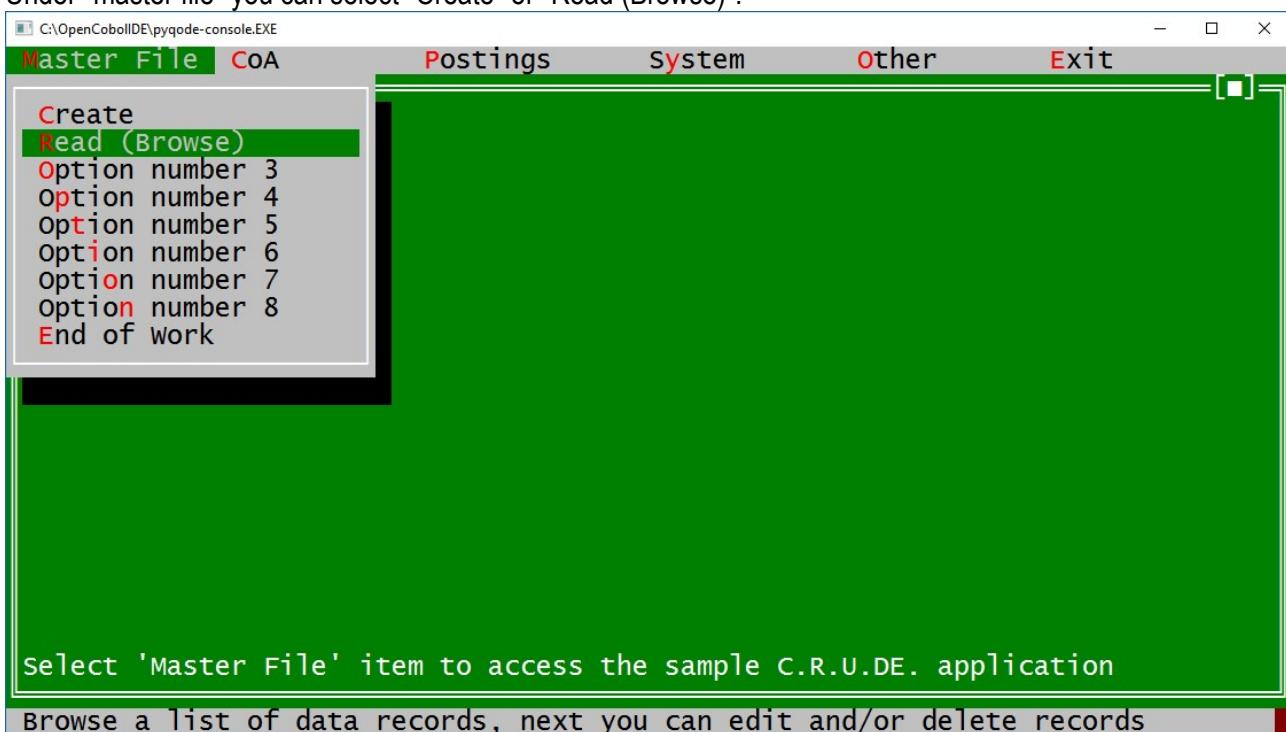
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## 2. Screenshots

Type GC71CRUDEMAIN to start the CRUDE application.  
The programm displays a cover with a running clock. Hit "enter" to continue.

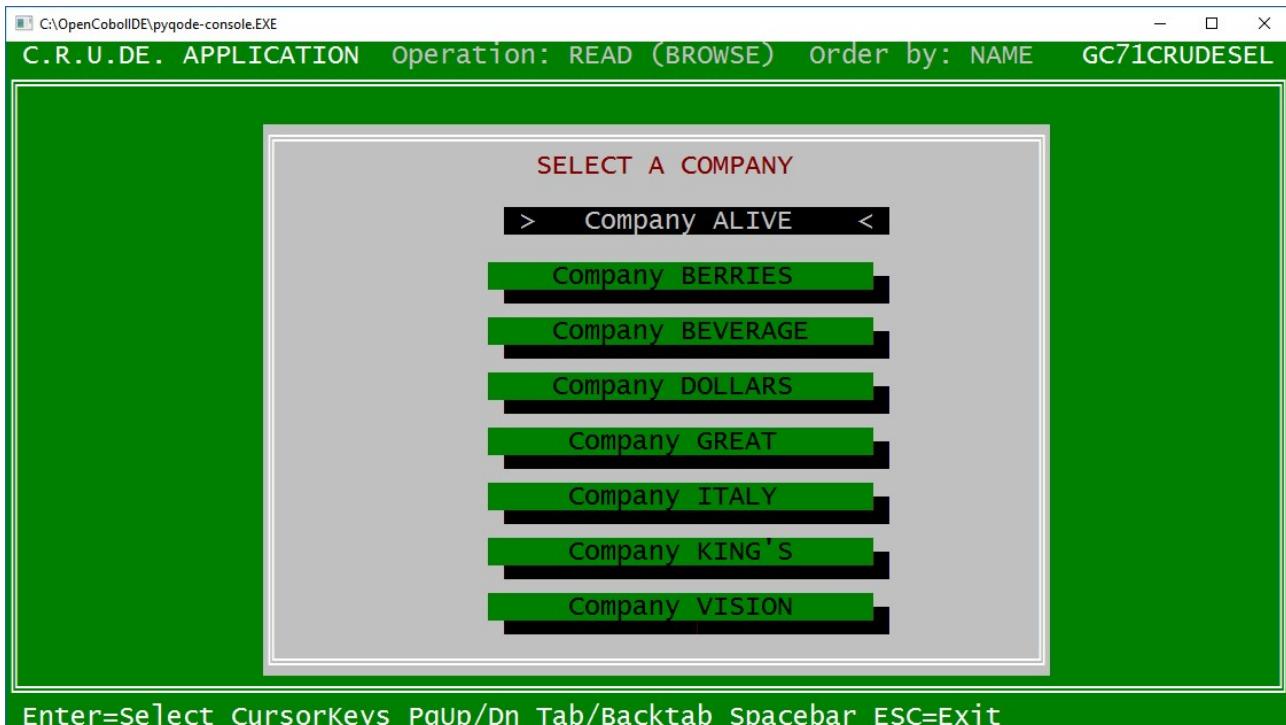


Under "master file" you can select "Create" or "Read (Browse)".



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GC71CRUDEMAIN calls GC71CRUDESEL. The program requires to select a button / company. We select the first button. The button shows a "click" effect.



The program GC71CRUDESEL calls GC71CRUDEBRO. It displays the content of GC71FALI.DAT file. Scroll with cursor keys down/up/right/left.

C.R.U.D.E. APPLICATION (File: GC71FALI.DAT sorted by: NAME)					GC71CRUDEBRO	
NUM.	Name	Code	Fiscal Code	VAT code	M	
18	BEST PERFORMER	VAAAAAAA	QWQWQWQW			
19	BROWN JOHN	VVVVVVVVVVVVVVV	VVVVVV		4	
20	CVCCCCCCCCCCCCCCCCCCCCCCCCCCCC	SCCCCCC	CFCCCCCCCCCCCCCCCC	cccccccccccc	3	
21	DAVID ROSS	123987	FISC-ROSS/!	SSAAVAT66-1		
22	FIRST	FFFFFFFFF	FISCAL CODE	VAT CODE	3	
23	HHHHHHHHHHHHHHHHHHHHHHHHHHHHH	HHHHHHHHHH	HHHHHHHHHHHHHHHHH	HHHHHHHHHHHHH	3	
24	JOE JOE	AAA2-1	SAD331ASD	asas		
25	JOHN JOHN	JJJJJJJJJJ	JJJJJJJJJJJJJ			
26	JOHNNY GREEN	AA11	DLRGNE4455T/6YY	12356712311	1	
27	KKKKKKKKKKKKKKKKKKKKKKKKKKKK	KKKKKKKKKK	KKKKKKKKKKKKKKKK	KKKKKKKKKKKK	3	
28	KORE SAMLA	KKKKKKK	KKKKKKKKKKKK	KKKKKK		
29	LLLLLLLLLLLLLLLLLLLLLLLLLLL	LLLLLLLLL	LLLLLLLLLLLLLLL	LLLLLLLLLLL	9	
30	M	6655443322	88-88,889/666666	ùùùùù		
31	MANUEL MMMMMMMMMMMMMMM	MMMMMMMM	MMMMMMMMMMMMMM	mmmmmmmmmmmm	3	
32	MISTER X	ASDF	QQW2233RR44	12322334455	2	
33	NAME	9900II	IOIOI89898YUYUY7	77987979797		
34	NNNNNN --MMMMMMM LLLòòò----	TTTTTT	TTTTTT	VAT 443311	9	
35	Q212	K111111111	121212212Q			
36	QQQQQQ	QQQ	QQ	qq		
37	QQQQQQQQQQQQQQQQQQQQQQQQQQ	CCCCCCCC	FFFFFFFFFFFF	iiiiiiiiii		
38	RED FRANCIS	O201010121	RED FRANCIS	VAT	3	
39	RED RONNIE	CCCC1111	C >> XX 11. c			

F1=Help Enter ESC CursorKeys PgUp/Dn Home Ctrl-C/E/D/R Ctrl-F1/2/3 Scroll:005

- File: "GC71CRUDEDODC-V01-20170528.doc" - Saved: 28/05/2017 22:53:00

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Scroll with key right. Type CTRL-R to display a "ruler". After type F1 to have a help window.

C:\OpenCobolIDE\pycode-console.EXE

C.R.U.DE. APPLICATION (File: GC71FALI.DAT sorted by: NAME) GC71CRUDEBRO

M.Payment	Union Ret.	Conc. Spese	Insurance	Rete	S.Area	CCIAA	RegDi
123,44	997.733,33	-11,0					
0,00	0,00	1111.111,0					
-5670.000,00	0,00	0,0					
3333.333,33	2222.222,22	3333.332,2					
9.834,50	0,00	321,5					
0,00	0,00	0,0					
123,23	0,00	123,3					
0,00	0,00	0,0					
-12.344,22	2.211,00	-123,0					
0,00	0,00	0,0					
<b>-123,00</b>	<b>2334.440,00</b>	<b>2.233,0</b>					
0,00	1111.110,00	0,0					
0,00	0,00	0,0					
0,00	0,00	0,0					
0,00	0,00	0,0					
8888.888,88	8888.888,88	8888.888,8					
0,00	0,00	0,0					
0,00	0,00	0,0					
0,00	0,00	0,0					
0,00	0,00	0,0					
55.555,33	0,00	0,0					
0,00	5555.555,55	3333.333,33	22.222,22	retere	zonazo	1111111111	ddddd
....+....300..+....1....+....2....+....3....+....4....+....350..+....6....+....7							

> CursUp/Down/Right/Left PgUp/Dn  
> Home: go to top of file  
> ESC: exit  
> Enter: update of record  
> Ctrl-C: create a new record  
> Ctrl-U: update of record  
> Ctrl-D: delete of record  
> Ctrl-F1: sort by NAME  
> Ctrl-F2: sort by CODE  
> Ctrl-F3: sort by FISCAL CODE  
> Ctrl-R: display/hide a ruler  
> +/- : modify horiz.scroll value

OK

CTRL-C to create a new record. CTRL-F1 or F2 or F3 to sort the list.

Use + and - keys to change the horizontal scroll value.

Type CTRL-E or enter to edit the selected row. GC71CRUDEBRO calls GC71CRUDECUD. Type enter on each field and update what you need.

C:\OpenCobolIDE\pycode-console.EXE

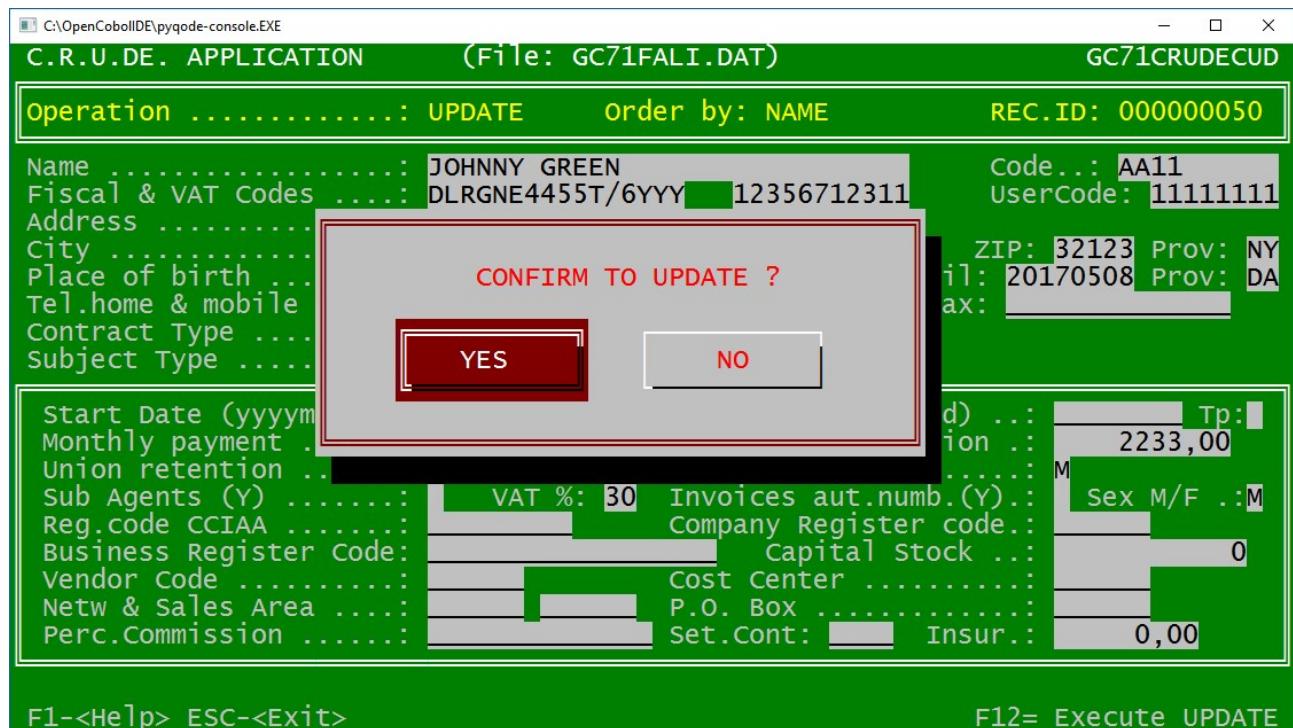
C.R.U.DE. APPLICATION (File: GC71FALI.DAT) GC71CRUDECUD

operation .....	UPDATE	order by: NAME	REC.ID: 000000050
Name .....	JOHNNY GREEN	Code...: AA11	
Fiscal & VAT Codes .....	DLRGNE4455T/6YYY 12356712311	UserCode: 11111111	
Address .....	5th street	ZIP: 32123 Prov: NY	
City .....	New York	il: 20170508 Prov: DA	
Place of birth .....	Dallas		
Tel.home & mobile .....	335(223-2345) +39/234-12345	Fax:	
Contract Type .....	M MONO-MANDATE		
Subject Type .....	A AGENT		
Start Date (yyyymmdd) .....	20170508	End Date (yyyymmdd) .....	Tp: 2233,00
Monthly payment .....	-123,00	Expense Contribution .....	
Union retention .....	2334440,00	Payment Type .....	M
Sub Agents (Y) .....	VAT %: 30	Invoices aut.numbr.(Y) .....	Sex M/F :M
Reg.code CCIAA .....		Company Register code .....	
Business Register Code .....		Capital stock .....	0
Vendor Code .....		Cost Center .....	
Netw & Sales Area .....		P.O. Box .....	
Perc.Commission .....		Set.Cont: [REDACTED] Insur.: 0,00	

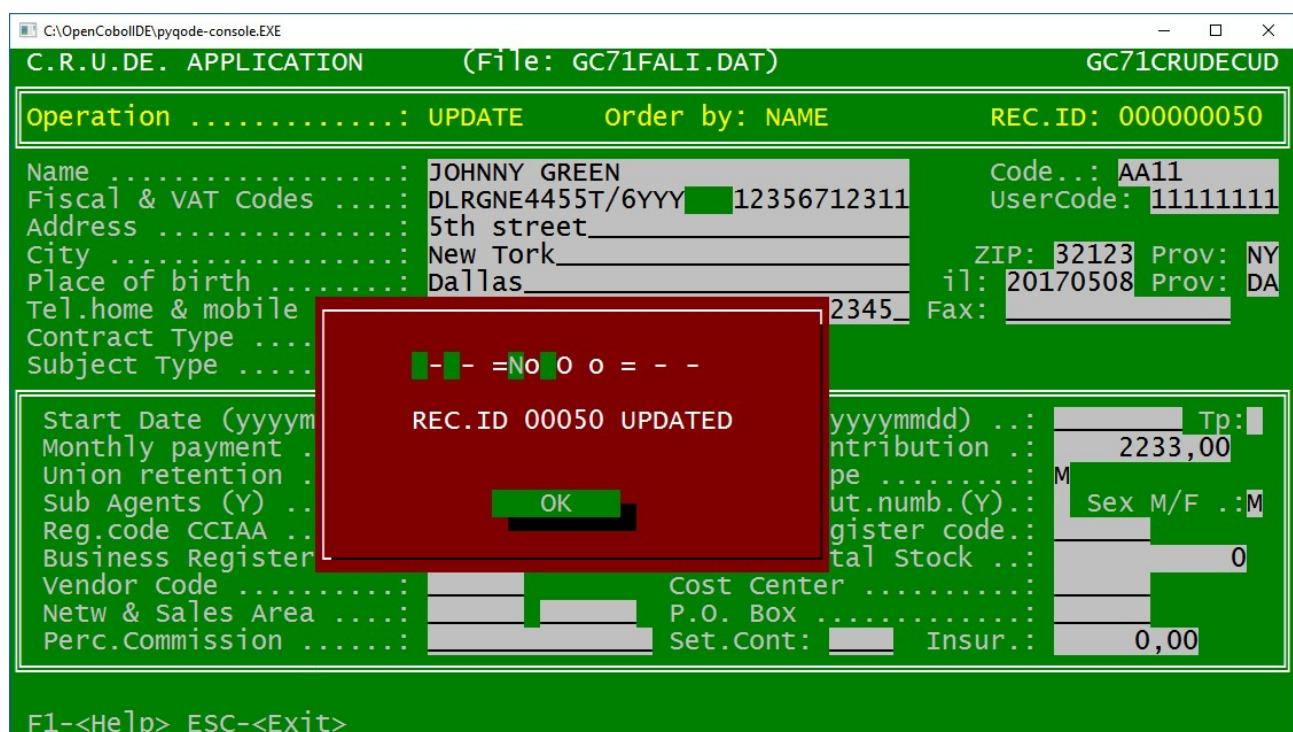
F1-<Help> ESC-<Exit>

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After last field F12 is enabled. Type F12 (or PageDown) and you will receive a confirmation message.



The system update the record and show a message .



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Type ESC to return to the list. Scroll with key left until you have the RECID column.  
Select a row and type CTRL-D to delete the record.

C.R.U.D.E. APPLICATION (File: GC71FALI.DAT sorted by: NAME)					GC71CRUDEBRO
**RECID**	NUM.	Name	Code	Fiscal Code	VAT
000000020	16	AMERIGO VESPUCCI	DD	2000000000000000	000
000000073	17	BBBBBBBBBBBBBBBBBBBBBBBBBBBBBB	BBBBBBBBBB	BBBBBBBBBBBBBBBBBB	bbb
000000002	18	BEST PERFORMER	VAAAAAAA	QWQWQWQW	
000000006	19	BROWN JOHN VVVVVVVVVVVVVVVVV	VVVVVVVV	VVVVVV	
000000059	20	CVCCCCCCCCCCCCCCCCCCCCCCCCCCC	SCCCCCCC	CFCCCCCCCCCCCC	ccc
000000031	21	DAVID ROSS	123987	FISC-ROSS/!	SSA
000000046	22	FIRST	FFFFFFFF	FISCAL CODE	VAT
000000074	23	HHHHHHHHHHHHHHHHHHHHHHHHHHHHH	HHHHHHHHHH	HHHHHHHHHHHHHHHHH	HHH
000000056	24	JOE JOE	AAA2-1	SAD331ASD	asa
000000022	25	JOHN JOHN	JJJJJJJJJJ	JJJJJJJJJJJJJJJ	
000000050	26	JOHNNY GREEN	AA11	DLRGNE4455T/6YYY	123
000000072	27	KKKKKKKKKKKKKKKKKKKKKKKKKKKK	KKKKKKKK	KKKKKKKKKKKKKKKK	KKK
000000026	28	KORE SAMLA	KKKKKK	KKKKKKKKKKKK	KKK
000000078	29	LLLLLLLLLLLLLLLLLLLLLLLLLLLL	LLLLLLLL	LLLLLLLLLLLLLLLL	LLL
000000039	30	M	6655443322	88-88 , 889/666666	ùùù
000000009	31	MANUEL MMMMMMMMMMMMMMM	MMMMMMMM	MMMMMMMMMMMMMMMM	mmm
000000049	32	MISTER X	ASDF	QQWW2233RR44	123
000000057	33	NAME	9900II	IOIOI89898YUYUY7	779
000000023	34	NNNNNNN --MMMMMMM LLLòò----	TTTTTT	TTTTTT	VAT
000000061	35	Q212	K111111111	121212212Q	
000000042	36	QQQQQQ	QQQQ	QQQ	qq
000000003	37	QQQQQQQQQQQQQQQQQQQQQQQQQQ	CCCCCCCC	FFFFFFFFFFFF	iii

F1=Help Enter ESC CursorKeys PgUp/Dn Home Ctrl-C/E/D/R Ctrl-F1/2/3 Scroll:005

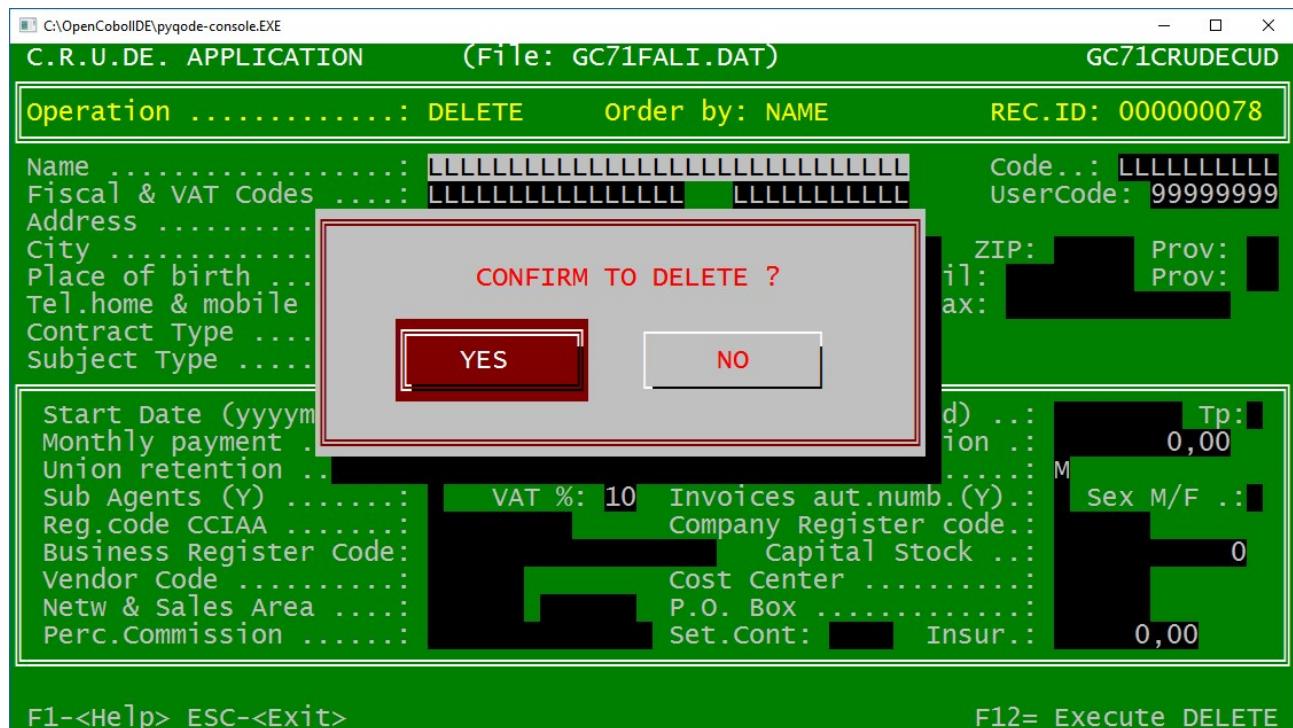
The system displays the data window. Press F12 (or PageDown) to require the delete of the record.

C.R.U.D.E. APPLICATION		(File: GC71FALI.DAT)	GC71CRUDECUD
Operation .....: DELETE		Order by: NAME	REC.ID: 000000078
Name .....	LLLLLLLLLLLLLLLLLLLLLLLLLLLL	Code...: LLLLLLLL	
Fiscal & VAT Codes .....	LLLLLLLLLLLLLLLL	UserCode: 99999999	
Address .....	[Redacted]		
City .....	[Redacted]		
Place of birth .....	[Redacted]		
Tel.home & mobile .....	[Redacted]		
Contract Type .....	P PLURI-MANDATE	ZIP: [Redacted]	Prov: [Redacted]
Subject Type .....	P PEOPLE COMPANY	Fax: [Redacted]	Prov: [Redacted]
Start Date (yyyymmdd) : 20170522	End Date (yyyymmdd) : [Redacted]	Tp: [Redacted]	
Monthly payment : 0,00	Expense Contribution : [Redacted]	0,00	
Union retention : 0,00	Payment Type .....	[Redacted] M	
Sub Agents (Y) : 10	Invoices aut.numb.(Y) : [Redacted]	Sex M/F : [Redacted]	
Reg. code CCIAA .....	Company Register code : [Redacted]		
Business Register Code .....	Capital Stock .....	0	
Vendor Code .....	Cost Center .....		
Netw & Sales Area .....	P.O. Box .....		
Perc.Commission .....	Set.Cont: [Redacted]	Insur.: 0,00	

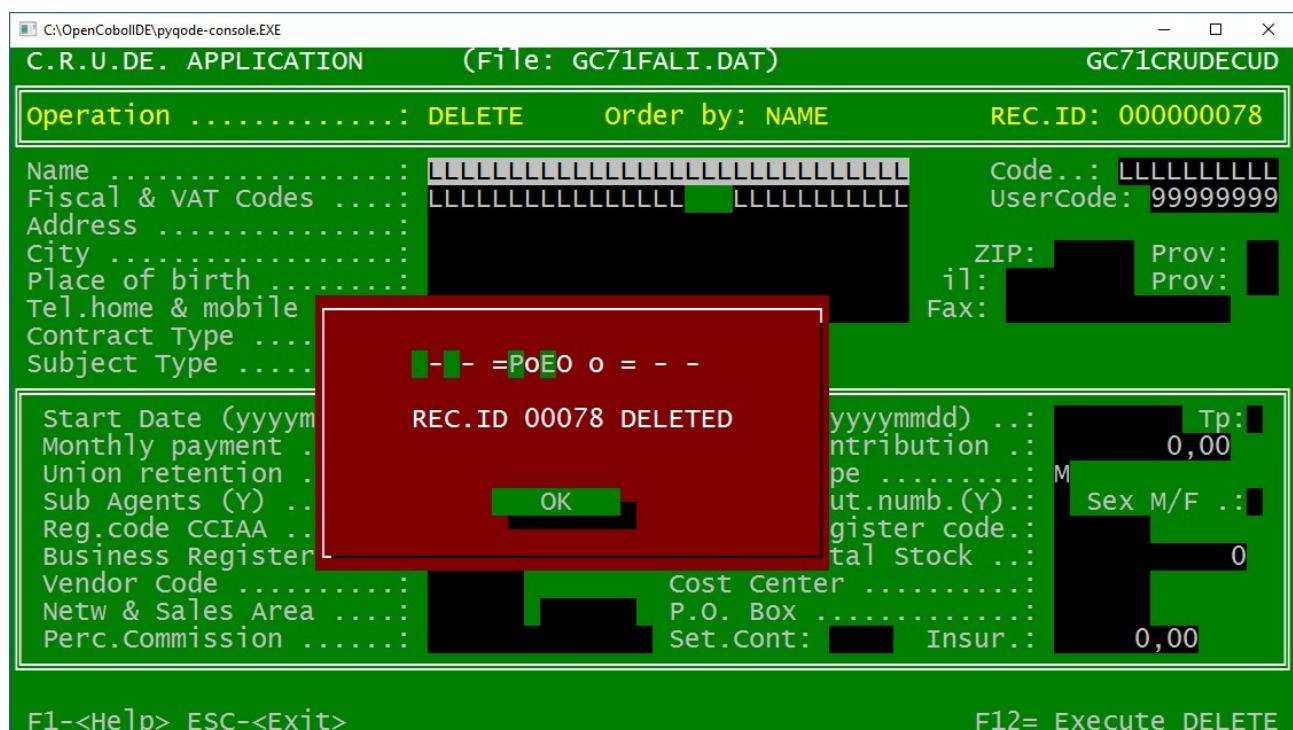
F1-<Help> ESC-<Exit> F12= Execute DELETE

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The system requires a confirmation.



The system has deleted the record ... and show the next record . You can delete it or type ESC to return to the list.

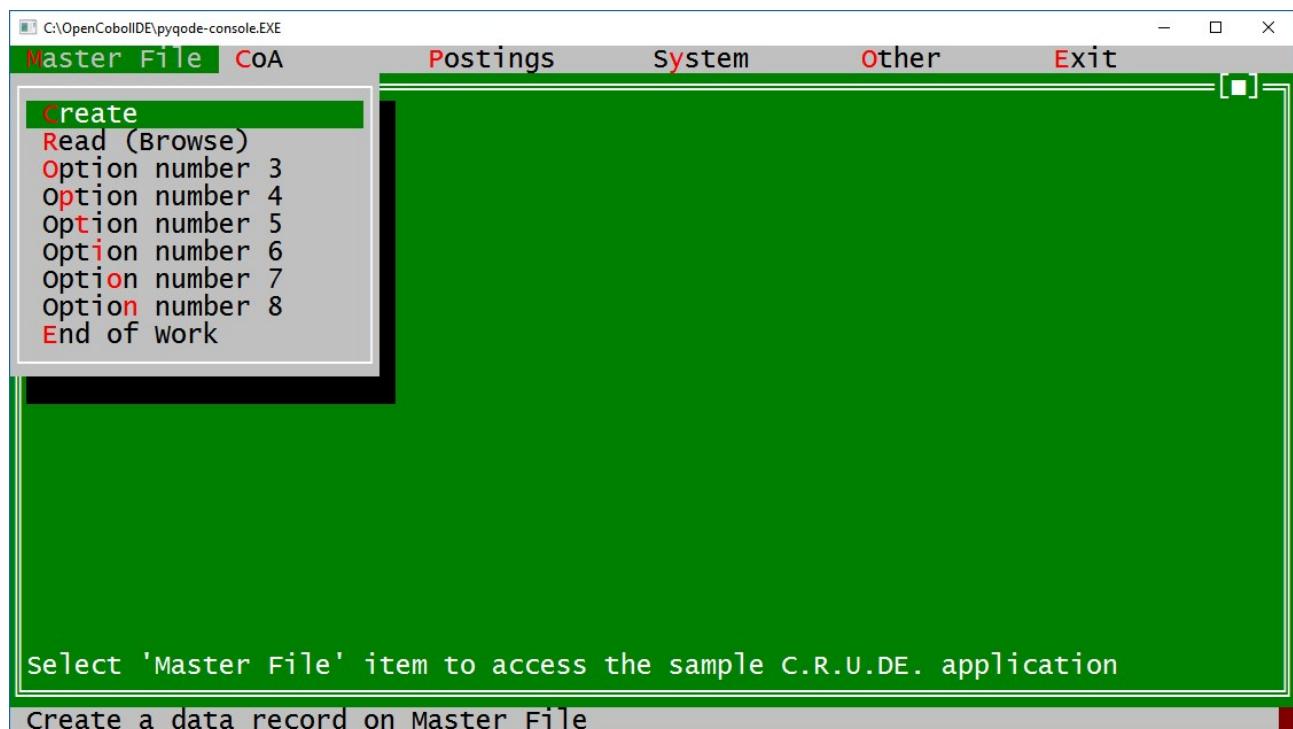


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When the list is on screen, type ESC twice to return to menu.

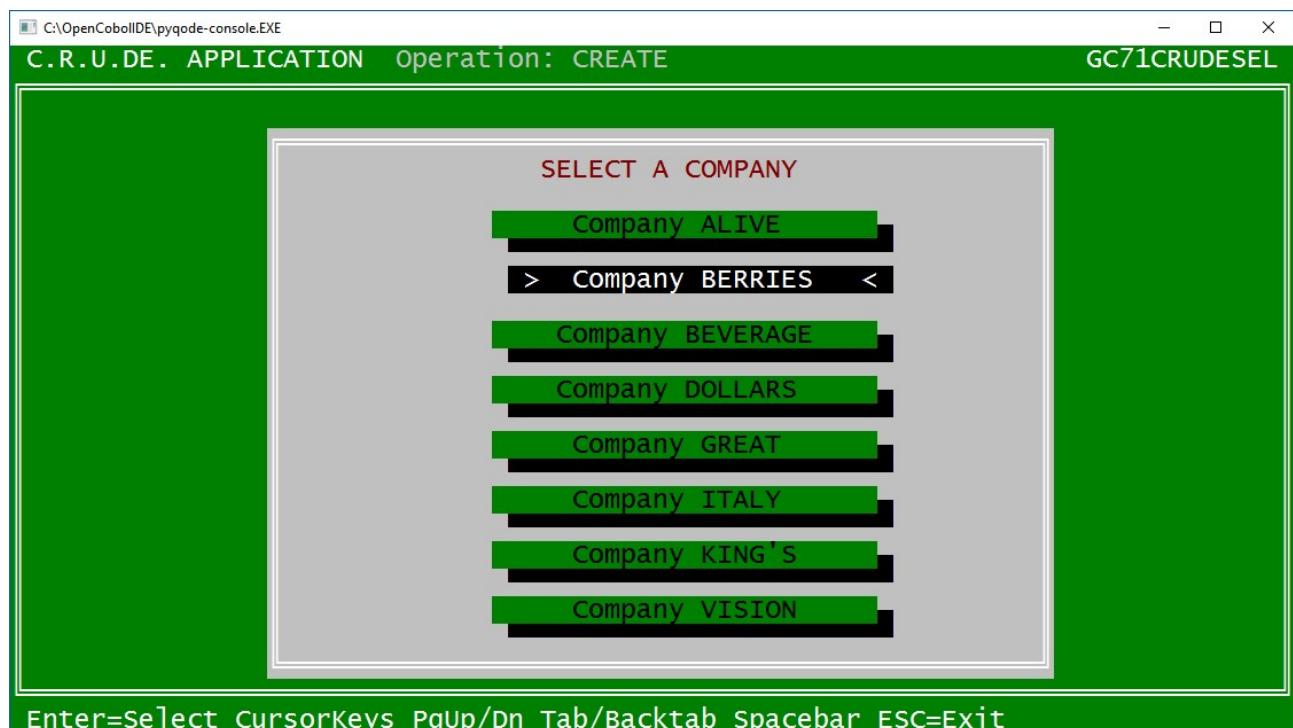
C.R.U.D.E. APPLICATION (File: GC71FALI.DAT sorted by: NAME) GC71CRUDEBRO					
**RECID**	NUM.	Name	Code	Fiscal Code	VAT
000000010	15	AMBER A	9999999999	9999999999999999	ppp
000000020	16	AMERIGO VESPUCCI	DD	2000000000000000	000
000000073	17	BBBBBBBBBBBBBBBBBBBBBBBBBBBBBB	BBBBBBBBBB	BBBBBBBBBBBBBBBBBB	bbb
000000002	18	BEST PERFORMER	VAAAAAAA	QWQWQWQW	
000000006	19	BROWN JOHN VVVVVVVVVVVVVVVVV	VVVVVVVV	VVVVVV	
000000059	20	CVCCCCCCCCCCCCCCCCCCCCCCCCCCC	SCCCCCC	CFCCCCCCCCCCCC	ccc
000000031	21	DAVID ROSS	123987	FISC-ROSS/!	SSA
000000046	22	FIRST	FFFFFFFFF	FISCAL CODE	VAT
000000074	23	HHHHHHHHHHHHHHHHHHHHHHHHHHHHH	HHHHHHHHHH	HHHHHHHHHHHHHHHHH	HHH
000000056	24	JOE JOE	AAA2-1	SAD31ASD	asa
000000022	25	JOHN JOHN	JJJJJJJJJJ	JJJJJJJJJJJJJ	
000000050	26	JOHNNY GREEN	AA11	DLRGNE4455T/6YYY	123
000000072	27	KKKKKKKKKKKKKKKKKKKKKKKKKKKK	KKKKKKKKKK	KKKKKKKKKKKKKKKK	KKK
000000026	28	KORE SAMLA	KKKKKK	KKKKKKKKKKKK	KKK
000000039	29	M	6655443322	88-88 , 889/666666	ùùù
000000009	30	MANUEL MMMMMMMMMMMMMMM	MMMMMM	MMMMMMMMMMMMMM	mmm
000000049	31	MISTER X	ASDF	QQWW2233RR44	123
000000057	32	NAME	9900II	IOIOI89898YUYUY7	779
000000023	33	NNNNNNN --MMMMMMM LLLòò----	TTTTTT	TTTTTT	VAT
000000061	34	Q212	K111111111	121212212Q	
000000042	35	QQQQQQ	QQQ	QQ	qq
000000003	36	QQQQQQQQQQQQQQQQQQQQQQQQQQ	CCCCCCCC	FFFFFFFFFFFF	iii

Now select the Create item.

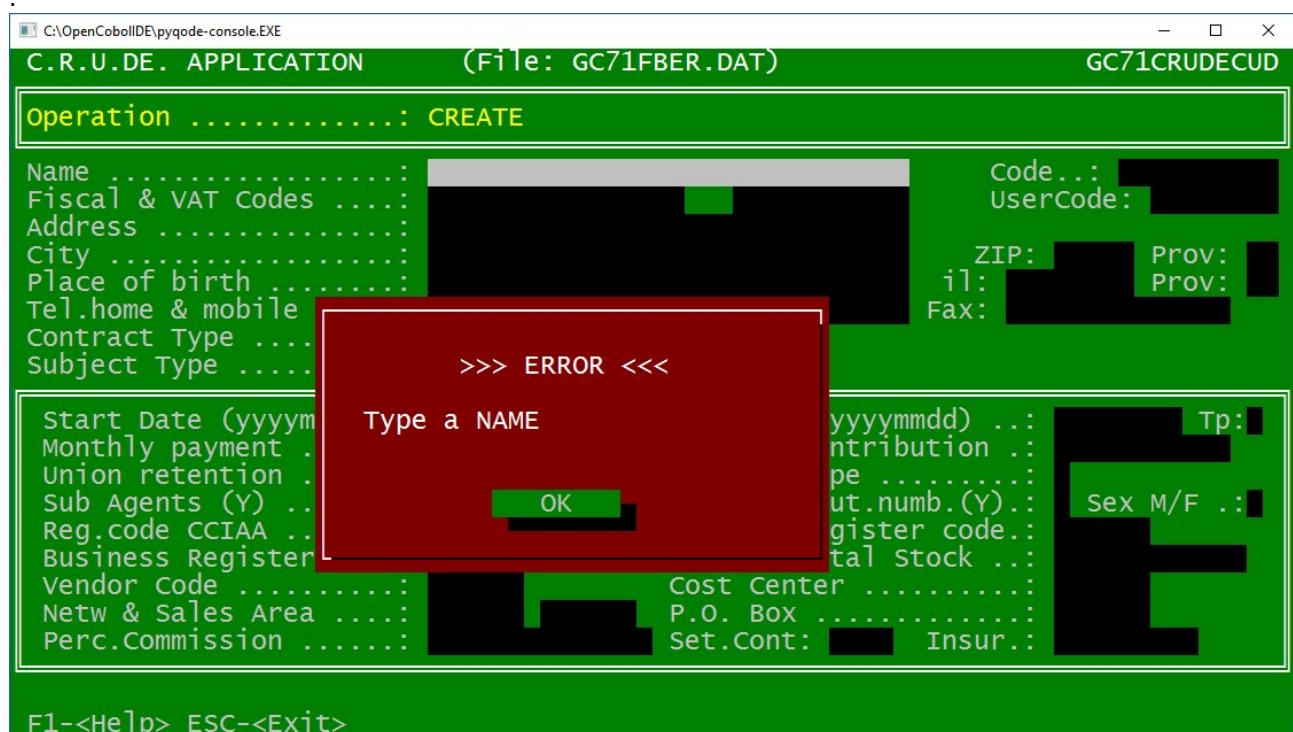


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Select a Company.



Enter a "name" or you will receive an error message



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When cursor is on a field Type F1. The GC71CRUDECUD will call GC74HELPVIEW passing the help key of that field. The system displays the help window with a running clock. You can scroll the help message.

C:\OpenCobolIDE\pyqode-console.EXE C.R.U.DE. APPLICATION (File: GC71FBER.DAT) GC71CRUDECUD

operation .....: CREATE

Name .....	Code...:
Fiscal & VAT Codes .....	UserCode: [REDACTED]
Address .....	ZIP: [REDACTED]
City .....	Prov: [REDACTED]
Pl	NAME OF AGENT
Te	Nel caso di agenti individuali specificare cognome e nome dell'agente.
Co	Per le societa' di capitali (SpA o SRL) specificare la ragione sociale della societa'.
Su	Per agenti costituiti in societa' di persone (SAS o SNC) specificare la ragione sociale della societa'. I singoli soci vanno specificati in una tabella a parte con le relative quote di partecipazione.
M	[REDACTED]
U	[REDACTED]
S	[REDACTED]
R	[REDACTED]
B	[REDACTED]
V	[REDACTED]
N	CurUp/Dn PgUp/Dn Esc=Top Enter=Exit
Pe	22:35:07

F1-<Help> ESC-<Exit>

Type each field. On a date field you can Type F4 to have a datepicker.

C:\OpenCobolIDE\pyqode-console.EXE C.R.U.DE. APPLICATION (File: GC71FBER.DAT) GC71CRUDECUD

Operation .....: CREATE

Name .....	ROBERT REDFORD	Code...: 7777777777
Fiscal & VAT Codes .....	RBRTREDFRD012112 [REDACTED] VAT551133	UserCode: [REDACTED]
Address .....	Strawberry Street, 123/2	ZIP: 12345
City .....	London	Prov: LD
Place of birth .....	Cardiff	Prov: [REDACTED]
Tel.home & mobile .....	???????	Fax: [REDACTED]
Contract Type .....	???????	
Subject Type .....		
Start Date (yyyymmdd) .....		dd): [REDACTED] Tp: [REDACTED]
Monthly payment .....		tion: [REDACTED]
Union retention .....	VAT	b.(Y): [REDACTED]
Sub Agents (Y) .....		code: [REDACTED]
Reg. code CCIAA .....		ock: [REDACTED]
Business Register Code .....		.....: [REDACTED]
Vendor Code .....		Insur.: [REDACTED]
Netw & Sales Area .....		
Perc.Commission .....		

Calendar

May 2017						
Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

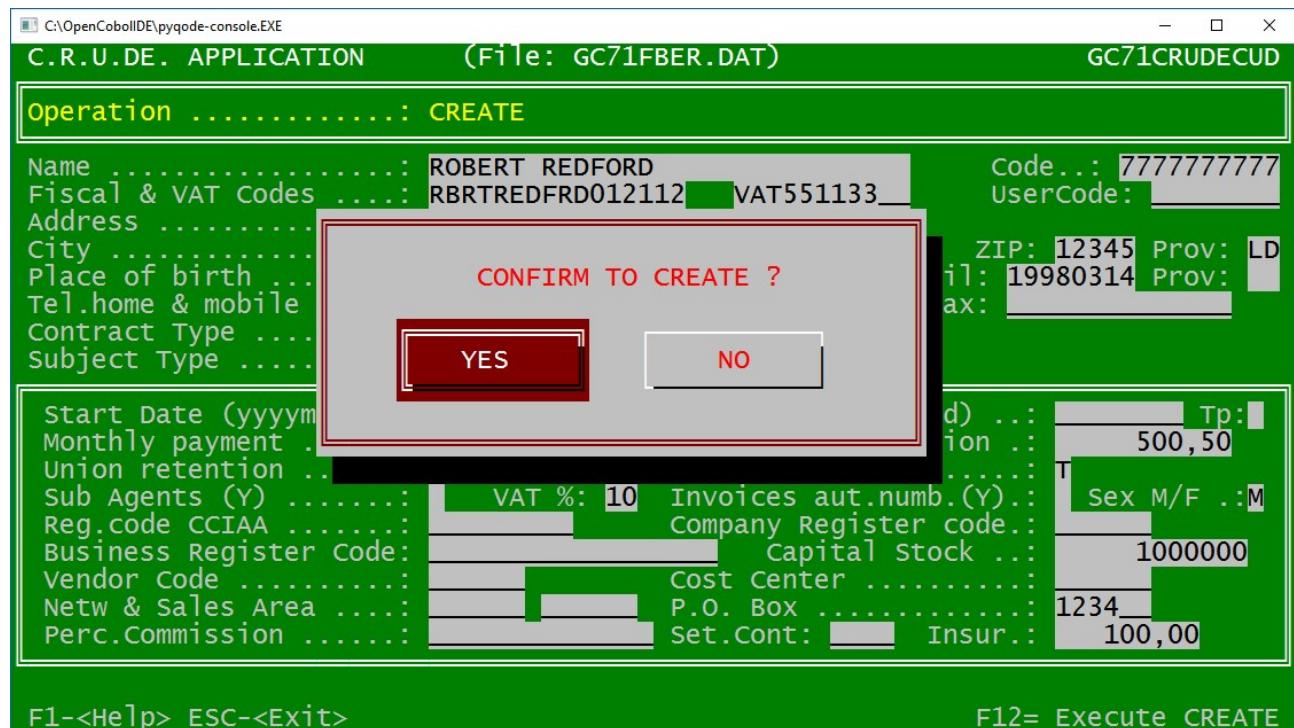
Cur, PgUpDn, +/-

Set.Cont: [REDACTED]

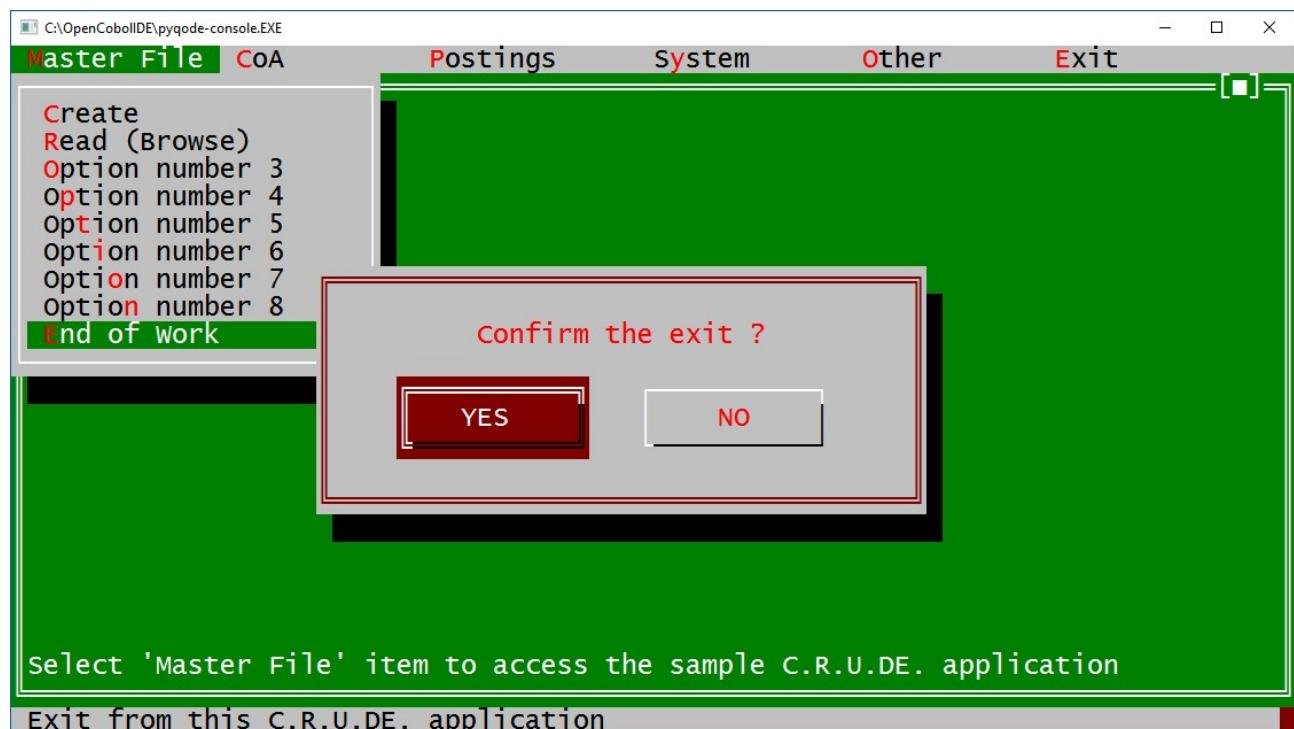
F1-<Help> ESC-<Exit> F4-<Date Picker>

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After the last field F12 key is enabled. Type it and confirm the creation of a new record.



return to menu and press ESC to exit.



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C:\OpenCobolIDE\pyqode-console.EXE

...OK ! End of C.R.U.D.E. Application.  
...GnuCOBOL TUI TOOLS COLLECTION (DILO).  
-----



Process terminated with exit code 0  
Press ENTER to close this window...

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### 3. Change Log

CHANGE LOG
<p><b>Version1 of 2017.05.28</b> <i>First release</i></p> <p>.</p>