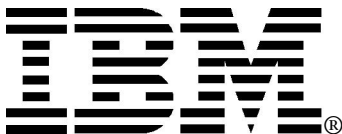


VisualAge Pacbase



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Presentation

This pocket guide describes the command language used to access the different VisualAge Pacbase screens. For more details, consult the Reference Manuals.

All VisualAge Pacbase screens can be accessed via input in the OPERATION CODE and CHOICE fields (O: CH:), located at the bottom of the screens.

The OPERATION CODE field is made up of 2 characters. The first character indicates the desired sub-network and the second indicates the requested screen presentation option.

The CHOICE field is used to select a screen. A set of hierarchical MENUS guide the user in accessing the various screens of the System.

The General Menu can be accessed by entering 'H' in the CHOICE field, or, on the sign-on screen, by pressing ENTER with no input in the CHOICE field.

An Entity sub-menu may be accessed by positioning the cursor on the desired sub-menu line and pressing ENTER. If the cursor position is not supported by the hardware in use, enter a slash '/' in the input field of the corresponding line and pressing ENTER.

Convention : strings are contained in single quotes.

Function Keys

The access to the various screens, in VisualAge Pacbase database, is facilitated by the cursor position or the Use of PFkeys.

The use of these functions depends on the hardware and operating system in use at the site. If the hardware does not support the standard use of function keys, you can use '.nn' Choice to simulate 'PFnn' function key use (for example, PF7 amounts to CH: .7).

In any case, the use of the standard command language is always valid.

The standard assignment of Function Keys is resumed as follows:

FK	Standard significance
PF1	Recall screen memorized in M1 (equivalent to operation code R1)
PF2	Recall screen memorized in M2 (equivalent to operation code R2)
PF3	Recall screen memorized in M3 (equivalent to operation code R3)
PF4	Call screen-related HELP (equivalent to action code '?')
PF5	Return to main menu (equivalent to choice 'H')
PF6	Back to sign-on screen (equivalent to operation code 'FT')
PF7	Inhibits implicit updates
PF8	-TC screen display starting from cursor position
PF9	Call of -TC screen from -PG and vice-versa or Zoom on key description from screen B DR
PF10	Branch to Entity Definition screen
PF11	Branch to Entity or Description Line General Documentation (G)
PF12	End of session with conversation saved

THE CHOICE FIELD : Presentation

Access an Entity

Each entity is identified by a 1-character entity type code:

CODE	ENTITY
*	LIBRARY
K	KEYWORD
E	ELEMENT
T	TEXT
V	VOLUME
I	INPUT AID
D	DATA STRUCTURE
S	SEGMENT
R	REPORT
P	PROGRAM
O	ON-LINE SCREEN
B	BLOCK DATABASE
M	MODEL ENTITY
F	META-ENTITY
Q	USER RELATIONSHIP
\$	USER ENTITY ITEM
Y	EXTENSION USER ENTITY

Definition screen for an entity is accessed by entering the appropriate 1-character entity type code:

Program Definition	P
On-Line Screen Definition	O

Depending on the entity, different description screens can be accessed:

The description of an entity is generally accessed by the 1-character code 'D':

Element Description	E D
---------------------	-----------

Call screens are used to call an entity within another. Use 'C' for call followed by the entity type code:

Program Call of Program	P..... CP
Segment Call of Elements	S CE

Specific screens used to further describe an entity are accessed through a 1-character code:

Program Work Areas	P W -- ...
Program Procedural Code	P P .. -- ..

Cross-References of an entity are accessed by entering 'X', optionally followed by the key of the first line to be displayed:

Element X-Reference to
Program pppppp, starting with
Procedural Code ff:

E XP pppppp
P ff

Assigned Text is accessed by entering 'AT':

On-Line Screen Assigned Text O..... AT

General Documentation is accessed by entering 'GC':

Input Aid General Documentation I GC

Remark: Once an entity has been selected, the combination 'entity type/entity code' can be replaced with a '-'.

Lists of entities

An entity list is obtained by entering an 'L'.

The second character specifies the type of list:

List by code	LC
List by type	LT
List by name	LN
List of undefined entities in dictionary	LF
List by code for update	LU
List by external name	LE

The third character specifies the entity type: LCT List by Code Text.

Remark: Special list commands are described with each entity.

Special choices

Special requests are entered with an explicit one to four character code:

Journal File Display of transaction	JO
Activity Calculation on Segment	S ACT

Menus are accessed by entering H with or without the entity type code specified:

Elements menu	HE
Special choices menu	HSC

THE CHOICE FIELD : The Entities

Library

Definition	* ...
General Documentation	* ... GC ...
Called Entities	* ... CR ...
Options	* ... GO ...
X-References to User Relationship	* ... XQ
List of User Entities using the Library	* ... XZ
List by code	LC* ...
Liste by name	LN*

Keyword

List of Keywords by code	LCK
Enrichment of the Thesaurus	K
Word Search	WS

Element

Definition	E
General Documentation	E GC ...
Called Entities by the Element	E CR ...
Description	E D ...
Assigned Text	E AT
Cross-References	EX
X-References to Text	E XT
X-References to Model Entity	E XM
X-References to User Relationship	E XQ ---
X-References to Database Block	E XB
	E XB DC ...
	E XB DH ...
	E XB DR ...
X-References to Volume	E XV
X-References to On-Line Screens	E XO
	E XO W -- ...
	E XO P .. --
	...
	E XO B
	E XO CP
X-References to Segments	E XS ...
X-References to Reports	E XR

X-References to Programs	E XR CE E XP E XP B E XP CP E XP SC E XP W -- ... E XP P .. -- ... E XP 8 .. -- ... E XP 9 .. -- ...
X-References to Meta-Entities	E XF
X-References to Relational/SQL Key	E XK
X-References to structured language U.E.	E XY ..
List of Undefined Elements in Dictionary	LFE
List of Elements by code	LCE
List for update	LUE
List by name (C2 : 3 formats indicated)	LNE
List by COBOL name	LAE
List by Relational name	LRE
List by Code of Child Elements	LDE
List User Entities using the Element	E XZ

Text

Text Definition	T
General Documentation	T GC ...
Called Entities by the Text	T CR ...
Assigned Text	T AT
List of Paragraphs Titles	T LT ..
Description of Paragraph	T D ... --
Text Simulation (of Paragraph Description)	T SIM ... D ..
Cross-References	T X
X-References to Volume	T XV
X-References to Text	T XT --
X-References to Documentation	T XG
X-References to User Relationships	T XQ
List of Texts by code	LCT

List of Texts by type	LTT .. T
List of Textsby name	LNT
List of User Entities using the Text	T XZ

Volume

Volume Definition	V
General Documentatior	V GC ...
Called Entities by the Volume	V CR ...
Assigned Text	V AT
Description of Contents	V D .. -- ...
Cross-References	V X
X-References to Volume	V XV
X-References to User Relationships	V XQ
List of Volumes by Code	LCV
List of Volumes by Type	LTV . V
List of Volumesr by Name	LNV
List of User Entities using the Volume	V XZ

Input Aid

Input Aid Definitione	I
General Documentation	I GC ...
Called Entities by the Input Aid	I CR ...
Assigned Text	I AT
Cross-References	I X
X-Ref's to Libraries	I X*
X-Ref's to Data Stuctures	I XD
X-Ref's to Reports	I XR
X-Ref's to Programs	I XO
X-Ref's to Model Entities	I XM
X-Ref's to Blocks	I XB
X-Ref's to Texts	I XT
X-Ref's to Elements	I XE
X-Ref's to Segments	I XS
X-Ref's to Volumes	I XV
X-Ref's to Input Aids	I XI
X-Ref's to Meta-Entities	I XF
X-Ref's to User Entities	I X\$
X-Ref's to User Relationship	I XQ
X-Ref's to Extension UE	IXY
X-Ref's to Meta-Extensions	I X1
Input Aid Description	I..... D ...
List of Input Aids by Code	LCI
List of Input Aids by Type	LTI . I
List of Input Aids by Name	LNI

List of Input Aids by External Ref's	LXI
List of U.E. using the Input Aid	I XZ
X-Refs of Input Aid External Ref's	XI
	XI I

Data Structure

Data Structure Definition	D ..
D.S. General Documentation	D .. GC ...
Generation Complements for D.S.	D .. GG
Called Entities by the D.S.	D .. CR ...
Assigned Text	D .. AT
Error Messages/Online Help	D .. GE ...
Generation for D.S.	
Data Structure X-Reference	D .. X
D.S. X-Ref's to User Relationships	D .. XQ
D.S. X-Ref's to Volumes	D .. XV
D.S. X-Ref's to Programs	D .. XP
	D .. XP W .. ---
D.S. X-Ref's to Screens	D .. XO
	D .. XO W .. ---
D.S. X-Ref's to Structured Language U.E.	D .. XY ..
List of User Entities using the D.S.	D .. XZ ..
List of D.S. by code	LCD
List of D.S. by type	LTD . D ..
List of D.S. by external name in programs	LPD
List of D.S. by external name in screens	LOD
List of D.S. by name	LND
Data Structure List of Segments	D .. LS ..

Segment

Segment Definition	S
Segment General Documentation	S GC ...
Called Entities by the Segment	S CR ...
Error Messages/Online Help	S GE ...
Generation for the Segment	
Generation Complements for the Segment	S GG ...
Generation Options for the Segment	S GO ...
Assigned Text	S AT
Sub-schemas and Sub-systems	S SS . -

Call of Elements (C2 : internal format) (C3 : output format)	S CE ...
Call of Elements Comments	S CE ... GC ...
Call of Elements Help Generation	S CE ... GE ...
Call of Elements Generation	S CE ... GG ...
Complements	
Integrity Constraints on Segment Level, Address and Length	S CN S LAL
Data Element Details (C1 : Element Name) (C2 : Relational Name)	S DED
Statistics	S STA
DB2 View Description	S DBE ...
Socrate Description	S SE ...
Activity	S ACT
Cross-References	S X
X-Ref's to Structured Language U.E.	S XY ..
X-Ref's to Segments	S XS....
X-Ref's to Database Blocks	S XB
X-Ref's to User Relationships	S XQ
X-Ref's to Volumes	S XV
X-Ref's to Programs	S XP
	S XP W ..

X-Ref's to Screens	S XO
	S XO W ..

List of Parent Segments	S LSP
List of Children Segments	S LSC
List of User Entities using the Segment	S XZ
List of Segments by Code	LCS
List of Segments by Name	LNS

Report

Definition	R ...
General Documentatont	R ... GC ...
Calles Entities by the Report	R ... CR ...
Assigned Text	R ... AT
Description	R ... D .. ---
Call of Elements (C2 : output format)	R ... CE .. ---
Layout	R ... L .. C ...

(C for column)	
Cross-References	R ... X
X-Ref's to Volumes	R... XV
X-Ref's to Programs	R ... XP
X-Ref's to User Relationships	R ... XQ
List of User Entities using the Report	R ... XZ
List of Reports by code	LCR ...
List of Reports by Nature Code	LTR . R ...
List of Reports by Name	LNR

Program

Definition	P
General Documentation	P GC ...
Called Entities by the Program	P CR ...
Assigned Text	P AT
Call of Data Structures	P CD ..
Call of P. M. S.	P CP --
Generation Options	P GO ...
Beginning Insertions	P B .. -- ...
(C2 : with source)	
Work Areas	P W -- ...
(C2 : with source)	
Procedural Code	P P .. -- ...
(C2 : with source)	P 8 .. -- ...
	P 9
	P SC .. -- ..
	P STR
Cross-References	P X
X-Ref's to Volumes	P XV
X-Ref's to Programs	P XP
X-Ref's to Screens	P XO
X-Ref's to User Relationships	P XQ
List of User Entities using the Program	P XZ
List of Programs by Code	LCP
List of Programs by Nature Code	LTP . P
List of Programs by Name	LNP
List of Programs by External Name	LEP
List of Titles without Condition	P TO .. -- <
List of Titles with Conditions	P TC .. -- <
	..
List of Titles with Conditions	P < ..
	P < .. TC

P < .. TO

....

Generated Procedural Code

P PG .. -- ...

(C2 : with source for -TC and -< choices)

On-Line Screen

Definition	O
General Documentation	O GC ...
Called Entities by the On-Line Screen	O CR ...
Assigned Text	O AT
Error Messages/Online Help Generation	O GE ...
Generation Elements	O GG ...
Generation Options	O GO ...
Call of P.M.S.	O CP
Beginning Insertions (C2 : with source)	O B .. -- ...
Work Areas (C2: with source)	O W -- ...
Procedural Code (C2: with source)	O P -- ...
Mapping (C for column)	O M .. C ..
Layout (C for column)	O L .. C ..
Dialogue or Screen Complement	O O
Address of Elements (C for column)	O ADR .. C ..
Dialogue or Screen Simulation (C1, C3, C4 ou C5)	O SIM ..
Cross-References	O X
X-References to Segments	O XS
X-References to User Relationships	O XQ
X-References to Volumes	O XV
X-References to Screens	O XO
List of User Entities using the Screen	O XZ
Call of Elements (C2: Labels content) (C3 : Elements label)	O CE ...
Call of Segments	O CS - ...

List of Screens

- by code	LCO
- by external program name	LPO
- by external map name	LSO
- by transaction name	LOT
- by type	LTO .. O
- by name	LNO

List of Titles

- without condition	O	TO .. -- < ..
- with condition	O	TC .. -- < ..
- with condition	O	< ..
	O	< .. TC
	O	< .. TO
- Generated procedural Code	O	PG .. -- ...

(C2: with source for -TC and -< choices)

Database Block

Definition	B	
General Documentation	B	GC ...
Called Entities by the Block	B	CR ...
Assigned Text	B	AT
Generation Elements	B	GG ...
Generation Options	B	GO ...

Database Block

HIERARCHICAL

Description	B	DH ...
Documentation	B	DH ... GC ...
Generation Elements	B	DH ... GG ...

Database Block

CODASYL

Description	B	DC ...
Documentation	B	DC ... GC ...
Elements Generation	B	DC ... GG ...
Codasyl Activity on a Set	C	

Database Block

RELATIONAL/SQL

Description	B	DR ...
Documentation	B	DR ... GC ...
Elements Generation	B	DR ... GG...
Building of the Key	B	DR ... K
Generation of	B	GN ...
RELATIONAL/SQL DDL		

Database Block

Turbo-Image

Description

B DT ...

Documentation

B DT ... GC ...

Cross-References

B X

X-References to User

B XQ

Relationship

X-References to Volumes

B XV

X-References to Blocks in PSB'B

B XB

X-References to Screens

B XO

B XO CS

B XO W ..

X-References to Programs

B XP

B XP W ..

X-References to Structured Language U.E.

B XY ..

List of Blocks

- by code

LCB

- by type

LTB

- by name

LNB

- by external name

LEB

- Areas by code (Codasyl)

LCA

list of Codasyl Sets by code

LCC

List of SQL objects / T.I Sets by Code

LTS -

List of SQL objects / T.I Sets by

LES --

External name

Model Entity

Definition

M

General Documentation

M GC ...

Called Entities by the Model Entity

M CR ...

Assigned Text

M AT

Relationship Call of Objects

M CM ...

- Documentation

M CM ... GC ...

Call of Elements/Attribute

M CE ...

- Documentation

M CE ... GC ...

Cross-References

M X

X-References to Model Entities

M XM

X-References to User Relationships

M XQ

X-References to Segments

M XS

X-References to Database Blocks

M XB

X-References to Volumes	M XV
List of Model Properties by code	LMP
List of Model F.I.C.s by code	LMC
List of Model Objects by code	LMO
List of Model Relationships by code	LMR
List of Model F.I.X's by name	LXC
List of Model Objects by name	LXO
List of Model Relationships by name	LXR
List of User Entities using the M.E.	M XZ

User Entity

Definition	\$ --
General Documentatont	\$ -- GC ...
Assigned Text	\$ -- AT
Description of contents	\$ -- D - ...
	\$ -- D ID
	..
Called Entities by the U.E.	\$ -- CR ...
Definition	\$ -- ID ..
Cross-references	\$ -- X
X-References to User Relationships	\$ -- XQ
X-References to Volumes	\$ -- XV
List of User Entities by code	LC\$--
List of User Entities by sort code	LS\$ --
List of User Entities by type	LT\$
List of User Entities by name	LN\$
List of Entities using the U.E.	\$ -- XZ

Special Choices

General Menu	H
Sub-Menu for the x entity	Hx
Generation and print requests	GP .. ---
List of Locked Entities	LL L-.....
Previous screen (Jump Previous)	JP
Next screen (Jump Forward)	JF
Same screen (Jump in Place)	JI

New Context

- New Library	N* ...
- New session	NH -
- Return to Current Session	NH9999

New Context

- New Change NC

Update mode

- No update (inhibits the implicit action codes) .NU

- Update (sets the implicit action codes) .U

- Inhibit all update (implicit & explicit) .NT

Input mode

- Insert mode .NY

- Return to standard overlay mode .NN

Display the differences between sessions

- without update .D -

- modify .M -

Within the Help function

- Return to beginning of documentation -

- Return to initial screen END ou JP

Job Review (some platforms)

- List of jobs LJOB

- Review of Job "nnpp" JOB nnpp

Lists

- of previous sessions by code LCH

- of previous sessions by name LNH

- of previous sessions by short name LRH

Journal file display transactions JO

Special Text Editing








Search for 'string 1' . S/string 1/

Step-by-Step Replacement . C1/old string/new string/

Replacement from the Beginning bound to the End bound . C2/old string/new string/ B . -- E . --
Global Replacement . C3/old string/new string/
Lines renumbering with 'nn' interval (default=20). .R nn

Note : '/' is some delimiter no included in strings.

OPERATION FIELD

C1	Selected library and higher level libraries	
U1	Selected library only	
Z1	Selected library and lower level libraries	
I1	Selected library and lower and higher level libraries	
>1	Higher level libraries	
<1	Lower level libraries	
A1	Identical to C1 with display of duplicates	
Mn	Stores or memorizes the screen upon which the request is executed (n=1-9)	
Rn	Recalls the screen that was stored by the Mn operation (n=1-9)	
FT	Final Transaction	

ACTION CODE FIELD

Blank	Implicit Update (create or modify)
C	Create
M	Modify
D	Delete
B	Block (multiple) deletion
L	End delimiter of multiple deletion
E	Inhibits implicit update on the line
?	Help documentation
S	Split line of text where cursor is positione
T	Line transfer
G	Group line transfer
L	End delimiter of group line transfer
I	Insert nnn lines here (nnn is entered in the Line number field)
R	Repeat nnn times, beginning with the line number where the R action code is entered (nnn is entered in the next field).
J	On any line other than an I, R or S line, gives the step 'nnn' by which to increment line numbers (optional, defaults to calculated line number)
X	Explicit update (creation/modification)

GENERATION AND PRINT COMMANDS

Thesaurus

- DCK Description of Thesaurus Keywords with synonyms
- LCK List of Keywords defined in the Thesaurus

Frozen Session

- LNH List of previous sessions by name
- LRH List of previous sessions by short name
- LCH List of previous sessions by session

Data Element and Propertie

- DCE Data Elements/Properties description
- DFE Undefined Data Elements description
- LCE List of Data Elements/Properties by Code
- LKE List of Data Element/Properties by Keywords
- LNE List of Data Elements/Properties by Name
- LXE List of unused Data Elements/Properties
- LAE List by COBOL name

Text

- DCT Description for Texts by Code
- DTT Description for Texts by Type
- LCT List of Texts by Code
- LKT List of Texts by Keywords
- LTT List of Texts by Type
- L*T List of Paragraph Titles of Text
- LNT List of Texts by Name

Volume

- DCV Description for Volumes by Code
- LCV List of Volumes by Code
- LNV List of Volumes by Name
- LKV List of Volumes by Keywords
- LTV List of Volumes by Type
- PCV Print Volumes by Code

Input Aid (P.I.A.'s)

DCI	P.I.A. description
LCI	List of P.I.A. by Code
LKI	List of P.I.A. by Keywords
LXI	List of P.I.A. by X-reference
LNI	List of P.I.A. by Name

Data Structure

DCD	Description of Data Structures
LCD	List of Data Structures by Code
LKD	List of Data Structures related by Keywords
LND	List of Data Structures by Name
LTD	List of Data Structures by Type
LPD	List of Data Structures by External Name in programs
LOD	List of Data Structures by External Name in screens
GCD	Generation of Selected Data Structures

Segment

DCS	Description of Segments in Format
LCS	List of Segments by Code
LKS	List of Segments by Keywords
LNS	List of Segments by Name

Report

DCR	Reports description
LCR	List of Reports by Code
LKR	List of Reports related by Keywords
LTR	List of Reports by Type
LNR	List of Reports by Name

Program

DCP	Program description
DSP	Description of Programs (Rev. Eng.)
LCP	List of Programs by Code
LEP	List of Programs by External Name
LKP	List of Programs related by Keywords
LTP	List of Programs by Type
LNP	List of Programs by Name
GCP	Source code for selected

GSP Source code for selected Program (Rev. Eng.)

On-Line Screen

DCO Description of Selected On-line Screens
DSO On-line Screen description (Rev. Eng.)
LCO List of On-line Screens by Code
LKO List of On-line Screens by Keywords
LPO List by External program name
LSO List of On-line Screens by Map name
LOT List of On-line Screens by External
Transaction name
LNO List of On-line Screens by Name
LTO List of On-line Screens by Type
GCO Description of Selected On-line Screens
GSO On-line Screen description (Rev. Eng.)

Client/Server and eBusiness Entity

DGC Description of a C/S Screen
DGS Description of a Business Component
GGC Generate a C/S Screen
GGS Generate a Business Component
GVC Generate a Proxy Logical View
GMF Generate a Folder
GMI Generate an INIT/TERM Server
GMM Generate a Command Monitor
GMS Generate a Server
GME Generate an Error Server

Error Message

LEC List of error messages for a Client
Component/Screen
LED List of error messages for a Data
Structure/Segment
LEO List of all error messages for a On-line
Dialogue/Screen
GED Generation of error messages for a Data
Structure/Segment
GEO Generation of error messages for a
Dialog/Screen
GEC Generation of error messages for a C/S
Dialogue/Component

GEF	Generation of error messages for a C/S Folder
GEI	Generation of error messages for INIT/TERM component
GES	Generation of error messages for a C/S Component

Option Generation Content

C1	Error messages for the Dialog and for each Screen
C2	C1 plus documentary help messages
C3	Error messages for the Dialog only
C4	Screen extractions for PacWeb, PAW (GEO)

Database Block

DTB	Database Blocks description by Type
LCB	List of Database Blocks by Code
LEB	List of Database Blocks by External name
LKB	List of Database Blocks related by Keywords
LTB	List of Database Blocks by Type
LNB	List of Database Blocks by Name
LES	List of SQL objects/T.I. Sets by External name
LTS	List of SQL objects by Code
GCB	Generation of source: Database Blocks
GSQ	Generation of DDL for Relational/SQL block

Model Entity

DCM	Description of the Model Entity
DCMC	Functional Integrity Constraints Description
DCMO	Model Objects description
DCMR	Model Relationships description
LCMC	List of Model F.I.C. by Code
LCMO	List of Model Objects by Code
LCMR	List of Model Relationships with F.I.C.'s
LCMP	List of Model Properties by Code
LKM	List of Model entities related by Keywords
PCM	Edition of Meta-Entities by Model Entity

User Relationship

DCQ	Description of User relationships
LCQ	List of User Relationships by Code
LKQ	List of User Relationships by Keywords
LNQ	List of User Relationships by Name

Meta-Entity

DCF	Meta-Entities description
LCF	List of Meta-Entities by Code
LKF	List of Meta-Entities related by Keywords
LNf	List of Meta-Entities by Name

User Entity

DC\$	User Entities description
LC\$	List of User Entities by Code
LK\$	List of User Entities related by Keywords
LN\$	List of User Entities by Name

Job Card and End-Of Job Delimiter

Flow control

FLB	- Database Blocks
FLS	- Relational/SQL blocks
FLD	- Data Structures
FLO	- Screens
FLP	- Programs
FSP	- Rev. Eng. Programs
FSO	- Screen job card / end delim (Rev. Eng.)
FGC	- Client Component
FGS	- Server Component
FLE	- Error messages
FGE	- C/S Error messages
FLV	- Volumes
FMS	- Server
FME	- eBusiness Error messages

Lowercase Shift

UPC	Shift to upper case for printers that do not support lower case
-----	---

STRUCTURED CODE

General Operators

N	Title, must be line 000
*	Comment
M	Move
MA	Move all
P	Perform
C	Compute
A	Add
S	Subtract
MP	Multiply
DV	Divide into
MES	Display message
ACC	Accept
STR	String
UNS	Unstring
CAL	Call
GT	Go to end of current sub-function with level number nn
GFT	Go to end of iteration
GDI	Go to beginning of iteration
GB	Go to beginning of current loop with level number nn
EXA	Examine
INS	Inspect
EXC	EXEC CICS ... END-EXEC
EXP	EXEC PAF END-EXEC
COB	COBOL B margin
COA	COBOL A margin
SUP	Suppress an automatic (sub-) function
SCH	Search on table
SCB	Search (on sorted table)
ADT	Call system date (6 characters)
ADC	System date with century (8 characters)
AD	Date format : Century positioned from CENTUR field
AD0	Date format : Century positioned from DAT-CTY
AD1	Date format : Century set to 19 if year < value in DAT-CTYT field
AD2	Date format : Century set to 20 if year < value in DAT-CTYT field
ADI	Date inversion (6 characters)
ADE	Date with slash (8 characters)
TIM	TIME HHMMSS format

TIF HHMMSS to HH:MM:SS

SQL Operators

EXQ	EXEC SQL ... END-EXEC
SCC	CONNECT order (or its like)
SDC	DISCONNECT order (or its like)
SCO	COMMIT order
SRO	ROLLBACK order
SWH	WHENEVER order
SQL	Personalized Access

COBOL II Operators

CON	Continue (no operand)
EVA	Evaluate
EVT	Evaluate true
EVF	Evaluate false
EEV	END-Evaluate (no operand)
EIF	END-IF (no operand)
EPE	END-PERFORM (no operand)
ESE	END-SEARCH (no operand)
INI	INITIALIZE
SEA	SEARCH
GOB	GO BACK

Operators for On-Line Only

AD6	ADT and ADI (on-line)
AD8	ADE (on-line)
GF	Go to end of automatic sub-function
GDB	Branch to start of current loop
GFR	Go to end-of-reception
GFA	Go to end-of-display
OTP	Immediate transfer to screen of external name
OSC	Screen transter
OSD	Deterred screen transfer
XR	Read segment (Perform of paragraph F80-ddss-R)
XP	Read first occurrence of segment
XRN	Read next occurrence of segment
XRU	Read for update of segment
XW	Write segment
XRW	Rewrite segment

XD	Delete segment
XUN	Unlock segment (VSAM)
Yaa	Create paragraph labels (F80-ddss-aa)
Xaa	With Yaa, Perform of paragraph F80-ddss-aa
ERU	User error (specified at dialogue level)
ERR	User field error

Relative positioning - On-Line Screen

*A	To insert the sub-function before the automatic sub-function (F20, F25, F35 and F65)
*P	To insert the sub-function after the automatic sub-function (F20, F25, F30, F35, F60 and F65)
*R	To replace an automatic sub-function (F20, F25, F35, F60 and F80)

Operators for Business Component Only

GFA	End of selection processing (Branch to the Fvunn-SELC-FN label)
GFR	End of validation/update processing (Branch to the Fvunn-CHUP-FN label)
GDB	Return to the beginning of current iteration (Branch to the Fvunn-CHUP-CATR-SVRx-CHCK label or Fvunn-SELC-CATR-SVRx-SELC label)
GDI	Go to the beginning of next iteration (Branch to the Fvunn-CHUP-CATR-SVRx-DONE label or Fvunn-SELC-CATR-SVRx-DONE label)
GFT	Go to the end of iteration (Branch to the Fvunn-CHUP-CATR-FN label or Fvunn-SELC-CATR-FN label)
GF ENDV	Go to end of logical view processing (Branch to the Fvunn-ENDV label)
XT	Allows you to call an elementary processing (transfers, processing on Segment, ...)
ERL	Logical error indicator on control/update access Error on Lock or Unlock query ordered by a graphical client (MOVE L TO TECH-IERRU)

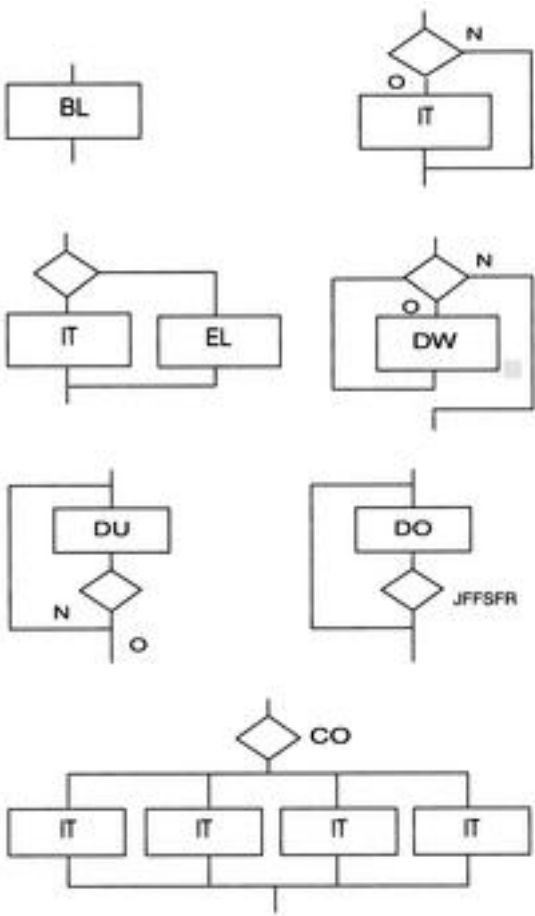
Relative positioning - Business Component

- *C Insert or replace code in the server or for a logical view. It must be defined on a level 05
- *B To insert in the elementary processing called by PERFORM

Operators for Batch Only

OPE	Open
CLO	Close
R	File read
W	File write
RW	File rewrite
RN	File read next (VSAM)
STA	File start read (VSAM)
DEL	Record delete (VSAM)
TRI	Sort
E	Error messagee
ADM	Insertion of slashes in a date with century
ADS	Date inversion with century

Structured code condition types



- | | |
|----|----------|
| BL | Block |
| IT | If Then |
| EL | Else |
| CO | Case of |
| DW | Do while |
| DU | Do until |
| DO | Do |
| OR | Or |
| AN | And |

ON-LINE GENERATION

Variables and Constants

INA	Number of Data Elements in the screen-top category
INR	INA + Number of Data Elements in the repetitive category
INZ	INR + Number of Data Elements in the screen-bottom category
IRR	Number of repetitions in the repetitive category
INT	Number of input fields in the Screen
IER	Number of error messages on the Screen
SESSI	Session number of the generated program
LIBRA	Code of the VisualAge Pacbase library
DATGN	Date of program generation
PROGR	VisualAge Pacbase Program code
PROGE	External name of the program
TIMGN	Time of program generation
USERCO	User code
COBASE	Database code
DATGNC	Program generation date with century
PRDOC	External name of the 'Help screen' program
DATOR	Field storing the date of processing
DATCTY	Field for loading the century
DATSEP	Contains the separator used for dates
DAT-CTYD	Field which allows to determine the current day century
DAT-CTYT	Field which allows to add the century to a date
TIMCO	Field for loading the time
TIMDAY	Field for loading the formatted time (HH:MM:SS)
5-xxnn- PROGE	Field containing the name of the program to branch to

Program control variables

ICF	Input configuration
	1 Screen in input
	0 No screen in input
OCF	Output configuration
	1 Screen in output
	0 No screen in output

OPERD		Operation code for deferred branching
	O	Deferred call of another Screen
CATMA		Saving of the transaction code of the screen-top category
OPER		Operation code
	A	Display
	M	Update
	S	Screen continuation
	E	End
	P	Same Screen
	O	Call of another Screen
CATM		Transaction code
	C	Creation
	M	Modification
	A	Deletion
	X	Implicit update
CATX		Code of the category being executed
	0	Beginning of reception or display
	blank	Screen-top
	R	Repetitive
	Z	Screen-bottom
ICATR		Indicator for current category being processed (Repetitive category only)
ddss-CF		Segment configuration indicator
	0	Segment I/O area does not contain a record
	1	Segment I/O area contains a record
FT		End of repetitive category indicator
	0	Lines to display
	1	No more lines to display
IK		Error indicator for Segment access or server call
	0	No error
	1	Error

Error Variables

CAT-ER		Ongoing error indicator for current category
	blank	No error
	E	Error
SCR-ER		Screen error indicator
	1	No error
	4	Error

ER-scrn- Data Element error indicator
delcod

- 0 Absent Data Element
- 1 Present Data Element
- 2 Invalid absence of Data Element
- 3 Invalid presence of Data Element
- 4 Erroneous class
- 5 Invalid content

DEL-ER Memorization of the Data Element Presence or Status at a given time

Screen Structure

01 - Initializations

05 BL

Reception

03 IT ICF = '1'

05 - Reception

05 BL

0510 - Reception of the Screen

10 BL

0512 - Documentation call

10 BL

processing

0520 - Validation of the operation

10 BL

code

-- LOOP BY CATEGORY

04 DW CATX

not = 'Z'

10 - Category processing loop

05 BL

1010 - - Category positioning

10 BL

15 - Validation of the transaction code

05 BL

20 - Data Element validation

05 BL

20A - Screen-top category

20R - Repetitive category

20Z - Screen-bottom category

25 - Segment access for reception

05 IT CATG = ''

25A - Screen-top category

25R - Repetitive category

25Z - Screen-bottom category

30 - Data Element transfer

05 IT CATG = ''

30A - Screen-top category

30R - Repetitive category

30Z - Screen-bottom category

35 - Segment access for updat -

05 IT CATG = ''

Server call

Reception

35A - Screen-top category	
35R - Repetitive category	
35Z - Screen-bottom category	
-- END OF LOOP for reception	04 BL
3999 - ITER-FI. GO TO F10.	
3999 - ITER-FT. EXIT.	
40 - Transaction management	05 IT
	GR-EG='1'
4010 - Set-up keys for new display	10 IT OPER =
	'A' or 'M'
4020 - Set-up keys for screen	10 IT OPER =
paging	'S'
4030 - End of transaction	10 IT OPER =
	'E'
4040 - Transfer to another Screen	10 IT OPER =
	'O'
-- End of Reception. (F45 - FN)	

Display

	03 IT OCF = '1'
50 - Display	05 BL
5010 - Initializations	10 BL
-- LOOP BY CATEGORY	04 DW CATX
	<> 'Z'
55 - Category processing loop	05 BL
5510 - Category positioning	10 BL
60 - Segment access for display -	05 BL
Server call	
60A - Screen-top category	
60R - Repetitive category	
60Z - Screen-bottom categor	
65 - Data Element transfer	05 BL
65A - Screen-top category	
65R - Repetitive category	
65Z - Screen-bottom categor	
-- END OF LOOP for Display	04 BL
6999 - ITER-FI. GO TO F55.	
6999 - ITER-FT. EXIT.	
70 - Error management	05 BL
7010 - Error messages processing	10 BL
7015 - Logical View error	10 BL
processing	
7020 - Positioning of attributes	10 BL
-- End of display. (F78-FN)	
8Z - Display and end of Program	05 BL

Display

8Z05 - Help sub-function	10 IT
	SCR-ER='1'
8Z10 - Display	10 BL
8Z20 - End of Program	10 BL

Called functions

80 - Physical Segment access routines	05 BL
81 - Called Validation Functions	
81CS - Server call	10 BL
81CV - Recovery of C/S communication area	10 BL
81ER - Abnormal end procedure	10 BL
81TA - Client context save	10 BL
81TR - Client context retrieval	10 BL
81UT - Memorization of users errors	10 BL
81UV - Database access error	10 BL
8110 - Numeric validation	10 BL
8115 - Initialization of the variable fields	10 BL
8120 - Validation and setting of date	10 BL
8130 - Help sub-function	10 BL
8150 - Documentation Help	10 BL
8160 - Help function return processing	10 BL

BUSINESS COMPONENT GENERATION

Variables and Constants

IRR	Number of repetitions requested by the client
SESSI	Session number of the generation Library
LIBRA	Library code
PROGR	Code of the component
USERCO	User code
COBASE	Database code
DATGN	Date of component generation
DATGNC	Component generation date with century
TIMGN	Time of component generation

Program Control Variables

IK	Error indicator for Segment access or server call
	0 No error
	1 Error
CATM	Transaction code
	C Creation
	M Modification
	A Deletion
	X Implicit update
A-CATM	Description of action codes of logical View data
A-CATM-CA	Non repeated data
A-CATM-CR	Repeated Data (occurs N)
ICATR	Indicator of the current repetition (repeated Logical View's data)
ICATRC	Number of requested repetitions during the call of a Business Component
OPERS	Operation code
OPERV	Logical View processing indicator
	V Recognized
	blank Not processed
OPER2	Operation code for the call of a second-level Business Component
OPERB	Indicates if the selection requested is a list at a Business Component all

OPERT	Area for the management of check/update/selection services
CH-view	Table used for the checks of the Logical View. Generated if the CHECKSER=YES. One item for each Data Element called in the LV.
	N No check on this Data Element (default value)
	P Missing Data Element
	blank All Data Elements are checked
L-CURS-EXTNAM	Closing of the cursor at the end of a selection service if an extraction method is used

Error Variables

DEL-ER	Memorizes Data Element error (work variable)
IER	Maximum number of errors on database accesses that the Business Component can detect before returning to the Client. (Number determined by the ACCESERR option)
K50L	Work indicator of the number of Segment access errors
K50D	Work indicator of the number of Data Element errors

Data Element Errors storage. Generated for each Logical View (view) called in the Business Component.

(Number of items in table depends on the DATAERR option)

EE-view-LIBRA	Library Code
EE-view-SERVER	Business Component code
EE-view-VIEW	Logical View code
EE-view-DATCOD	Data Element code
EE-view-DATERR	Error code
EE-view-DATTYP	Error type
	'S' Standard error
	'U' User error
EE-view-ICATR	Line number on which the error was detected

Storage of Segment Access Errors.

The number of items depends on the ACCESERR option.

V-ERR-SEGCOD	Erroneous Segment code
V-ERR-SEGERR	Error code
V-ERR-SEGTyp	Error type
V-ERR-ICATR	Rank of the erroneous occurrence in a multi-occurrence processing
V-ERR-LIBRA	Library code
V-ERR-SERVER	Business Component code

Manipulable Variables

You can modify the following areas but it is left to your own responsibility. It is recommended to use intermediary areas described in the WWS. Caution: you must not add or modify existing values of these areas.

TECH-CLIENT	Code of the calling Client. Not used for a Client calling Business Components in synchronous mode
TECH-VIEW	Code of the Logical View to be processed
TECH-SERVER	Code of the Business Component called
TECH-OPER	Service requested by the Client for the Logical View.
	L Monoinstance read service
	A selection service (generally a BROWSE from one or more criteria)
	E Check service (no data is returned)
	X Check, selection service
	M Check, update service
	T Check, update, selection service
	U User service
TECH-ICATRC	Number of instances to be processed by the Business Component for the Logical View
TECH-ICATRS	Number of instances selected by the Business Component for a selection, check or update service
TECH-IERRS	Indicator of non-system errors for selection access, set by the Business Component
	O No error
	L No error, end of list
	S Error
TECH-IERRU	Indicator of non-system errors for check or update access, set by the Business Component
	O No error
	C Access error
TECH-IERCC	Indicator of non-system
	O No error
	A Non-recoverable error on file or DBMS physical access
	L Length error for the communication area or the different buffers
	O Error on service request
	S Value error for TECH-STRUCT
	V Logical View code not known by the Business Component

TECH-IDATAC		Check indicator of the Logical View's data
	blank	Check on request (see the description of the indicator in CONT-BUFFER)
	N	No check
	C	Check of all the Data Elements
TECH-ERRCOD		File status or SQLCODE in the case of physical access error (split up into TECH-STATUS area)
TECH-CODE		Name of the file or the table in which a non-recoverable error has been detected
TECH-TYPE		File access type in the case of a non-recoverable error ((R for read, W for write, ...))
TECH-LGREAL		Real length of the communication area
TECH-EXTNAM		Extraction method code set by the Client
TECH-TRANS		Beginning/end of transaction indicator set by the Client
	B	Beginning of transaction
	E	End of transaction
TECH-COMMIT		Indicator of the COMMIT requested by the Client
	blank	No COMMIT request
	C	COMMIT request
	R	ROLLBACK request
TECH-LGDATA		Length of the check indicator of the Logical View's data set by the Client
TECH-NUVERS		Version number used for the compatibility check between the Business Component and the graphic Client
TECH-BROWSE		Selection type indicator
	blank	Direct selection by selection criterion
	B	Browse
	M	Direct selection by the Logical View's data
TECH-SRVUSR		User Service initialized by the Client
TECH-REQST		Management of the call sequence of Business Components after a client query
	F	First Business Component called
	M	Intermediary Business Component called
	L	Last Business Component called
	C	Single Business Component called
TECH-CALSRV		Management of the open and close sequence of cursors for large reading instance selection
	blank	Default
	F	First call of the Business Component to carry out selection

	M	Intermediary call of the Business Component to carry out selection
	L	Last call of the Business Component to carry out selection
	C	Selection carried out using one call
TECH-TIMEST		Timestamp management for a lock or unlock service
USER-BUFFER		Optional User Buffer. This buffer is the same within a Dialogue

Business Component Structure

Body of the Program

05	FSERVER	Beginning of server processing
10	FSERVER-STRVIEW	Structure validation and length of the communication area buffers
05	FSQL	SQL declaration
10	FSQL-WHENEVER	Clause Whenever
10	FSQL-CURSR-SEGT	Declare Cursor
05	FVIEW	Processing of the VIEW logical view
10	FVIEW-BEGV	Initialization of the logical view processing
10	FVIEW-CHUP	Check/update processing
15	FVIEW-CHUP-CATX	X Category processing = 'A' : before repetitive, = 'R' : repetitive, = 'Z' : after repetitive
20	FVIEW-CHUP-CATX-SRVO	O Service processing (O = 'E', 'L', 'M', 'T' or 'X')
25	FVIEW-CHUP-CATX-SRVO-INIT	Initializations
25	FVIEW-CHUP-CATX-SRVO-CHCK	

- 05 FVIEW**
 - Logical check processing
 - 25 FVIEW-CHUP-CATX-SRVO-TRAN
 - Loading before update
 - 25 FVIEW-CHUP-CATX-SRVO-UPDT
 - Logical update processing
 - 25 FVIEW-CHUP-CATX-SRVO-DONE
 - End of service processing
 - 10 FVIEW-LOCK
 - Lock
 - 10 FVIEW-UNLK
 - Unlock
 - 10 FVIEW-SELC
 - Selection processing
 - 15 FVIEW-SELC-CATX
 - X Category processing
 - = 'A' : before repetitive
 - = 'R' : repetitive
 - = 'Z' : after repetitive
 - 20 FVIEW-SELC-CATX-SRVA
 - Selection service processing
 - 25 FVIEW-SELC-CATX-SRVA-INIT
 - Initializations
 - 25 FVIEW-SELC-CATX-SRVA-SELC
 - Logical selection processing
 - 25 FVIEW-SELC-CATX-SRVA-TRAN
 - Loading after selection
 - 25 FVIEW-SELC-CATX-SRVA-DONE
 - End of service processing
 - 10 FVIEW-USER
 - User processing
 - 10 FVIEW-ERRV
 - VIEW logical view error processing
 - 10 FVIEW-ENDV
 - End of VIEW logical view processing
- 05 FSERVER-END**
 - End of server processing

Performed Processings

- 10 FVIEW-TRDT**
 - Transfer of the logical view data to the Segment data in physical access
- 15 FVIEW-TRDT-CATX
 - X Category processing (X = 'A', 'R' or 'Z')

- 10 FVIEW-CHKD**
 Logiciel view data control
- 15 FVIEW-CHKD-CATX
 X Category processing (X = 'A', 'R' or 'Z')
- 10 FVIEW-TRVW**
 Transfer of Segment data to the logical view data
- 15 FVIEW-TRVW-CATX
 X Category processing (X = 'A', 'R' or 'Z')
- 10 FSEGT-CHCK**
 Logical check access processing of SEGT Segment
- 15 FSEGT-CHCK-CATX
 X Category processing (X = 'A', 'R' or 'Z')
- 20 FSEGT-CHCK-CATX-ALIM
 Key loading
- 20 FSEGT-CHCR-CATX-CALL
 Physical access call
- 20 FSEGT-CHCK-CATX-ERRS
 Error processing on physical access
- 10 FSEGT-UPDT**
 Processing of the logical update access on SEGT Segment
- 15 FSEGT-UPDT-CATX
 X Category processing (X = 'A', 'R' or 'Z')
- 20 FSEGT-UPDT-CATX-ALIM
 Key loading
- 20 FSEGT-UPDT-CATX-CALL
 Physical access call
- 20 FSEGT-UPDT-CATX-ERRS
 Error processing on physical access
- 10 FSEGT-SLCT**
 Processing of the logical selection access on SEGT Segment
- 15 FSEGT-SLCT-CATX
 X Category processing (X = 'A', 'R', 'Z' or 'T')
- 20 FSEGT-SLCT-CATX-ALIM
 Key loading
- 20 FSEGT-SLCT-CATX-CALL
 Physical access call

- 10** **FSEGT-SLCT**
- 20 **FSEGT-SLCT-CATX-ERRS**
 Error processing on physical access

- F80** **Physical access**
- F80 Physical access

- F81** **Complementary processing**
 (end of Program, error management...)

BATCH PROGRAM GENERATION

Conditional Variables

FTBn	Final total control break at level n Processing is ending on all data structures synchronized on input for all records having the same key at level n. ('1'- YES, '0'- NO)
ITBn	Initial total control break at level n Processing is starting on all data structures synchronized on input for all records having the same key at level n. ('1'- YES, '0'- NO)
dd-FBn	Final control break on data structure dd at level n The last record, at level n, on data structure dd, is ready for processing. ('1'- YES, '0'- NO)
dd-IBn	Initial control break on data structure dd, level n The first record, at level n, on data structure dd, is ready for processing. ('1'- YES, '0'- NO)
dd-CFn	File configuration at level n '1' - File match: process in this iteration '0' - Bypass file in this iteration
dd-OCn	Occurrence on Data Structure dd at level n A record on Data Structure dd with usage 'P' is being processed in this program cycle.
dd-FT	Input data structure dd has detected end-of-file ('1'- YES, '0'- NO)
dd-FI	Control break processing only '1' - File 1/0 area contains last record of file '0' - File 1/0 area does not contain last record of file

Table Indexes and Counters

IddssM	Contains the value of the maximum number of entries specified by the user
IddssL	Contains the value of the number of entries actually loaded from segment ss in data structure dd. This number cannot exceed the maximum specified above.

IddssR	Varying from 1 to IddssL, used for all look-ups on the table loaded from data structure dd, segment ss. Once the table is loaded, this index is initialized to zero if there is no overflow, or to the number of records read if an overflow has occurred.
5-dd00-CPTENR	Record counter for data structure dd Incremented with each READ or WRITE of the d.s.

Validation Processing (Work areas and variables)

DE-ERR	Stores the presence status of each data element of the transaction being processed. Each elementary data element (eeeeee), other than FILLER, ENPR, GRPR, ERUT and their sub-elements, is provided with a status field within the table. This field is named ER-ss-eeeeees (ss = SEGMENT CODE) The values vary at different points in the processing cycle: <ul style="list-style-type: none"> 0 Data element absent 1 Data element present 2 Invalid absence of data element 3 Invalid presence of data element 4 Erroneous class 5 Invalid content
ID-ER	.The last field in the table is ID-ER and is used for storing the record identification status: <ul style="list-style-type: none"> 0 Record type and action code are valid values 5 Error detected on record type 6 Error detected on action code
DEL-ER	Stores the presence status of the data element being processed

ER-PRR	Used only to carry out transfers between DE-ERR and a data structure (USAGE OF D.S. = M, N or E) with a reduced error array.
SE-ERR	Stores the presence status of each transaction file record type. Generated if the program contains a transaction file (to be validated or not). Each record type is provided with a status field within this table. This field is named SE-ER(I01). The values vary at different points in the processing cycle: <ul style="list-style-type: none"> 0 Record absent 1 Record present 2 Invalid absence of record 3 Invalid presence of record 7 Duplicate record 8 Invalid creation 9 Invalid modification or deletion
TR-ER	The last field in the table is named TR-ER and is used for storing errors detected. <ul style="list-style-type: none"> 1 no error detected 4 An error is detected
SE-ERE	Stores the presence status of the record being processed.
GR-ER	Stores information concerning errors detected on a group of transactions which update a record, of at least one principal data structure.
UT-ERUT	Stores the userot).

Tables used for Reports

CAT-TAB	Category table: stores all categories to be printed in this iteration.
ST-TA	Table storing the structure number, constant part number, and page/line skip for the category to be printed.
r-LAB	Table containing constants for report r.
ST-SLS	Stores the structure number, constant part number, skip to be executed before writing a line and char. set. option (special printer).

CATX	Stores the category of report being printed.
5-dd00-rPC	Page counter for report r in data structure dd initially set to zero.
5-dd00-rLC	Line counter for report r of data structure dd.
5-dd00-rLCM	Counter for maximum number of lines per page.
r-cc-NL	.Number of lines necessary for printing category cc of report r.
Jddrcc	Index associated with repetitive category cc for report r of data structure dd. Contains the rank of the category (cc) being printed, at the time the structures are being loaded.

Automated Totaling Fields

Trst-eeeeee(n)	Accumulator at level n, for data element eeeeeee of structure st in report r.
Grst-eeeeee	Grand total accumulator, for data element eeeeeee of structure st in report r.

Batch Program Structure

01	Initializations	05	BL
	01dd - Open File, prime Read	10	BL
	Instruction for file with control break orload of the table files.		
	Iteration beginning - Read		
05	Read sequential files with no control break	05	BL
	05dd - Read dd-file	10	BL
10	Read sequential files with control break	05	BL
	10dd - Read dd-file	10	BL
	End of run		
20	End of run	05	IT FT=ALL '1'

End of run

20dd - Close dd-file	10 BL
2099 - Stop Run	10 BL

Break-Configuration

22 Calculate file control breaks	05 BL
24 File matching logic	05 BL
26 Total control break logic	05 BL
30 Calculate validation variable	05 BL

Validation

33 Identification validation	05 BL
33AA - Record Type Validation	10 BL
33BB - Transaction Code Validation	10 IT ID-ER='0'
36 Duplicate record validation	05 BL
39 Presence of data elements	05 IT ID-ER='0'
3900 - Record dd00	10 BL
39nn - Record ddnn	10 IT 1-dd00- struct='nn'
42 Record structure validation	05 IT ID-ER='0'
4210 - Common Part	10 BL
4220 - Specific parts	10 BL
45 Data element contents validation	05 IT ID-ER='0'
4500 - Record dd00	10 BL
45nn - Record ddnn	10 IT 1-dd00- struct='nn'
51 Record presence validation	05 IT ID-ER='0'
5110 - Record Presence Validation	10 BL
5120 - Record Absence Validation	10 IT dd-FBn='1'
70 Existence validationnn	05 IT ID-ER='0' and dd-IBn='1'
70dd - Existence validation on dd-file	10 BL

Update

73 Update	05 IT ID-ER='0' and SE-ER(I01)='1'
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Errors processing

76	Store errors and Backout	05 BL
	76dd - Backout for dd-file	10 IT FTBn='1' and GR-ER='1'

Print

8r	Report logic for report r	05 IT condition on -D
	8rZZ - Loads Constant Part	10 BL
	8r00 - Loads Variable Part	10 BL
	8r99 - Physical Write	10 BL

Write files

90	Write	05 BL
	90dd - Write dd-file	10 BL
	9099 - ITER-FN. GO TO F05 (END of LOOP)	10 BL

Called functions

95	Function called by PERFORM (from 05 or 10 functions for input data structure with a W organization on the -CD screen	
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