SUPRTOOL™ 6.7

Database Handyman
for HP e3000 and HP-UX and Linux

Quick Reference Guide

Suprtool Commands by Function

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Output		Excel	Spaces
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Subtotal		HTML	Zero
Title			
Total			
Zero			

Commands Common to All Modules

Before	Form	Redo	Use
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Suprtool Commands

The following list describes the commands that Suprtool understands at the ">" prompt. Continue command lines with "&" and combine commands on one line with ";". Shorten command names to the substring printed in capitals (e.g., BA for Base). You can use CI !variables in commands on MPE and $environment variables on HP-UX.

Add *tablename*

Add ownername.*tablename*

The Add command inserts records into an Oracle table. Before records can be added, an Oracle database must be open. You can specify just the tablename or the ownername.tablename combination. The specified table name must be a valid table, not a view. For adding records to an Eloquence database please see the Put command.

```
>add customer
```

BAse [[host][:service]/]database

Open an Eloquence database (close current base). Base command also follows value of Eloquence variable EQ_DBSERVER.

```
base sample,5

base :eloqdb/sample,5

base hostname.robelle.com:eloqdb/sample,5
```

BAse [*system#*] *base* [*mode*] [*pass*]

Open an IMAGE database (close current base). Specify remote base with system# prefix. Use "?" for pass to prompt with no echo in batch. (Default: logon = system, mode = 1, pass = ";")

```
>base actrec.dat        {mode = 1, pass = ";"}
>base actrec.dat,5,reader
>base sys2#act.db,5     {remote on sys2}
```

Before [*start* [/*stop*]] | *string* | [ALL | @]

Redo commands with chance to modify. (Default: previous)

Clean [SPECIAL | <string> <range>]

Specifies what characters to clean when using the $Clean function. The SPECIAL keyword means characters from Decimal 0 to Decimal 31. Characters that match those defined with the Clean command, will be replaced by the value defined by Set CleanChar, which defaults to space. Clean characters can be defined with decimal notation "^" and/or the actual character as a string. To find records with specific characters see the $findclean function in the IF command.

```
>in mysdfile
>clean special,"^128:^190","^255","}"
>extract byte-field = $clean(byte-field)
```

Chain *setname search-field* = [*key-values* | *table*]

Read an IMAGE or Eloquence dataset by search path, TPI, or B-tree and select specific records (masters) or chains of records (details) for explicit key values; requires previous Base command. Specify the key values either

by an explicit list of values separated by commas or by a table name (see Table command on page 10.)

```
>chain d-sales,customer="12345"
>table slist,customer,file,slist.db
>chain d-sales,customer=slist
>chain d-sales,part-no="3YJ "
```

Define *field byteposition sublen* [*type*][*subcount*]

Define a new data field (name <33 characters) by specifying an absolute location and format. First byte of input record is 1. See Data-Types on page 12. (Default: type = byte, subcount = 1)

```
>define city,11,10       {byte type}
>define TransType,1,2,int   {1 = first}
>def amt,11,2,int,12     {amt repeats 12 times}
```

Define *field fieldname* [*qualifier*]

Define a new data field that is relative to the position of an existing database or Defined field. The qualifier equals

[(*subscript*)] [[*offset*]] [*sublen*] [*type*] [*subcount*]

The (subscript) specifies one sub-item of a compound item such as 5J2; 1 is the first and default sub-item. The offset specifies a byte offset from the existing location of fieldname; 1 is the default. The sublen and type override the existing size and data-type. See Data-Types on page 12. When you specify a subcount, the sublen is the byte-length of each subfield.

```
>define itemcount,status,2,int
>define costtotal,status[2],4,ieee
>define middle,name(2)
```

DELete

Delete selected records from IMAGE or Eloquence input dataset using DBDELETE.

DO [*start* [/*stop*]] | *string* | [ALL | @]

Repeat previous commands without modifying them.

```
>do 5/9     {repeat several commands}
>do if      {repeat last If command}
```

DUplicate ONLY | NONE KEYS [*num*] | RECORD [COUNT] [TOTAL *field* ...]

Include or exclude duplicate records for the output file. There are options to count the duplicate output records, and to total up to fifteen fields.

```
>duplicate none keys          {remove dups}
>duplicate only keys          {keep only dups}
>duplicate none keys 1        {first sort level}
>duplicate none keys count    {count dups}
>duplicate none keys total sales-amt, units-sold
```

EDit

Edit a database (see Dbedit Subsystem on page 19). Use the Base command before using the Edit command.

Exit [ABORT | SUSPEND | XEQ]

Perform task and return to parent process. Exit Abort abandons task. Suspend lets you return to task later.

```
>exit            {default = Xeq}
>exit suspend    {stop without executing}
```

EXPort [*stexport-command*]

Invoke STExport/MPE as a son process or pass a command to STExport.

```
>export input sdfile
```

You cannot use Suprtool/UX's Export command to invoke STExport/UX, but you can run STExport/UX by itself.

```
>/opt/robelle/bin/stexport
```

EXTract *field* [(*subscript*)] [= *value* | = *field2* | = *expression*] [,..]

Create output records by stringing together fields from the input record and constant values. Extracts are cumulative; you can use multiple extract commands. Extract can use dates (see Item command on page 6) and expressions (one per command, must be at the end of the command).

```
>ext custnum,transtable(3)
>ext CustTotal=15000
>ext CustName," ",CustAddr
>ext SalePrice = (SalePrice * 1.10)
>ext Day = (date-field mod 100)
>ext ByteField = ^7    {=^G (bell)}
>ext c = (6000 - cost)
>ext yesterdate = $today(-1)
>ext date-field = $date(*/*/*-1)
>ext ccyymmdd-i2 = $stddate(date-mmddyy)
>ext ccyymmdd-i2 = $stddate(date-mmddyy,$eom)
>ext date-field = $stddate($days(date-field) +7)
>ext num-days = ($days(date1) - $days(date2))
>ext positive = $abs(num-expression)
>ext packed-field = $signed(integer-field)
>ext int-field = $truncate(real-expression)
>ext full-name = ($trim(first-name) + " " + &
                 $trim(last-name))
>ext lowercase = $lower(city)
>ext uppercase = $upper(city)
>ext $ETOA(ByteField) {EBCDIC to ASCII}
>ext field = $lookup(table,key,tabledata)
>ext new-price=$number(new-price-ascii)
>ext dbl-count=$counter
>ext count=$subcount(order-number)
>ext first-name=$split(full-name,first,"/")
>ext address(1)=$clean(address(1))
>ext mytotal=$total(sales-dollars)
>ext mysub=$subtotal(sales-dollars,order-number)
>ext int-field=$number(byte-number)
>ext edit-amount=$edit(sales-amount,"$$,$$$.99-")
>ext mycbcount=$subcount(sort-break)
>ext full-name=$proper(full-name)
>ext name=$translate(name)
>ext ccyymmdd=$month(ccyymmdd,+24)
>ext ccyymmdd=$month(ccyymmdd,+24,$EOM)
>ext disp-field=$leadzeroz(disp-field,J)
>ext byte-field=$leadzerob(byte-field,J)
>ext byte-field=$justifyl(byte-field)
>ext byte-field=$justifyr(byte-field)
```

```
>ext dbl-int=$inrecnum
>ext byte-field=$respace(text-field,J)
>ext dint-field=$length(byte-field)
>ext dint-field=$length(num-field)
>ext name=$change(name,"Neal","Neil")
```

EXTract *field1* [(*subscript1*)] \ *field2* [(*subscript2*)]

Specify an inclusive range of fields to extract.

```
>ext ProductNo \ SalesQty
>ext SalesAmt(4) \ SalesAmt(6)
```

Form [SETS | ITEMS | PATHS | *dataset* | *data-item* | *filename*]

Show information about IMAGE or Eloquence database, datasets, items, or self-describing files. On HP-UX output goes to $stdlist. On MPE output goes to Formout file, defaulting to $stdlist.

```
>form sets          {list the datasets}
>form d-cust        {details on d-cust set}
>form sdfile        {fields in self-describing file}
```

Get *setname* [*subset*]

Select an IMAGE or Eloquence dataset as input source; requires previous Base command. Subset options select only part of dataset. (Default: read the entire dataset.)

[(*startrec*/*endrec*)] **{range of record numbers}**

[(#*n*)] **{selects every nth record}**

```
>get dtrans
>get dtrans(100/200)      {first record is 1}
>get dtrans(#4)           {every 4th record}
```

Help [*command-name* | *keyword* [,*section*]]

Provide access to the on-line user manual. Type a keyword (e.g., Help Access) or a command-name. HQ for brief help.

```
>help          {default is browse}
>hq list       {quick summary of List command}
```

IF *expression*

Select a logical subset of the input source through an expression that tests one or more fields. See Record Selection on page 13 for details.

```
>if TransCode="01" and amount>1000
>if $upper(City)="VANC","SEAT","PORT"
>if StatWord.(4:1)=1 and addr=="@BC@"
>if a = alpha
>if $lookup(part-no-table,partno)
>if date=$today
>if TotalPrice <> (SalesTotal + Taxes)
>if $null(salestotal)
>if not $null(salestotal)
>if $invalid(date-field)
>if $stddate(dt-mmyydd) < $stddate(dt-aammdd)
>if (date-field mod 100) = 01
>if InDate <= $date(*/*-6/*)          {6 months ago}
>if ($days(ship-date) - $days(order-date)) > 14
>if $abs(oldprice - newprice) > 10
>if $truncate(total / months) > 10
>if $lower(city) = "niagara falls"
```

```
>if $ltrim(last-name) = "Armstrong"
>if $findclean(last-name)
>if $lookup(mytable,char-field,id-field)=id-field
>if $length(byte-field) > 29
>if $length(num-field) > 10
```

Input *file* [= *dataset*] [*subset*]

Select an MPE or KSAM file as input source. The file can be the name of an existing disc file or a reference to a :File equation (*name). The =set option requires an open base because the file is assigned the same record format as the IMAGE set. The first record is 0, except for some KSAM files where it is 1. Subset options select only part of the file.

[(*startrec*/*endrec*)] **{range of record numbers}**

[(*$first+10*/$last-10)] **{range of record numbers}**

[(*#n*)] **{selects every nth record}**

```
>input log23        {disc file}
>input *            {$stdinx}
>input trans(#5)    {every 5th record}
```

Input *file* [*fileinfo*] [*subset*]

The file is the name of an HP-UX file. The fileinfo options are Reclen, LF, and NOLF. The Reclen option must be followed by the record length (in bytes) of each data record. Subset options select only part of the file.

[(*startrec*/*endrec*)] **{range of record numbers}**

[(*$first+10/$last-5*)] **{range of record numbers}**

[(*#n*)] **{selects every nth record}**

```
>input uxfile,reclen 80,nolf
>input sdfile              {requires ".sd" file}
```

ITem *itemname* DATE | DECIMAL *attribute*

Define the date format or implied decimal places for an item. For compound items, all sub-items are assigned the same date type or number of decimal places. The attribute is a string for Date and the number of decimal places for Decimal. The Date attributes describe the format of the date.

yymmdd	X6 Z6 J2 K2 P8
ddmmyy	X6 Z6 J2 K2 P8
mmddyy	X6 Z6 J2 K2 P8
yyyymmdd	X8 Z8 J2 K2 P10
ddmmyyyy	X8 Z8 J2 K2 P10
mmddyyyy	X8 Z8 J2 K2 P10
ASK	J1
PHdate	J1 K1 J2 K2
calendar	J1 K1
yymm	X4 Z4 J1 K1
yyymmdd	J2 P8
Oracle	X7
ccyymmdd	X8 Z8 J2 K2 P10
ccyymm	X6 Z6 J2 K2 P8
yyyymm	X6 Z6 J2 K2 P8
aamm	X4
aammdd	X6
mmddaa	X6
ddmmaa	X6

ccyy	X4 Z4 J1 K1
SRNChronos	X6
mmyyyy	X6 Z6 J2 K2 P8
yyddd	X5 Z5 J2 K2 P8
ccyyddd	X7 Z7 J2 K2 P10
HPCalendar	J2 K2
EDSDate	J2 P8
JulianDay	J2
PHdate8	J1 K1 J2 K2

```
>item UnitCost,decimal,2
>item InDate,date,ddmmyy
>extract InDate=$today(-1)  {yesterday}
>if InDate<=$date(*/*-6/*)  {6 months ago}
```

[Key] *byteposition bytelen* [*type*] [DESC]

Define an arbitrary sort field anywhere within the input record. See Data-Types on page 12. (Default: type = byte, ascending)

```
>key 1,10           {first ten bytes}
>key 21,4,double    {double integer}
>key 25,2,int,desc  {descending order}
>25,2,int,desc      {omitted the Key command name}
```

LINk [*suprlink-command*]

Invoke Suprlink as a son process or pass a command to Suprlink .

```
>link input sdfile
```

You cannot use Suprtool/UX's Link command to invoke Suprlink/UX, but you can run Suprlink/UX by itself.

```
/opt/robelle/bin/suprlink
```

List [STANDARD]
[RECORD]
[DUPLEX]
[TITLE "*string*" [DATE *format*]]
[HEADING "*string*" ["*string*"...]]
[ONEPERLINE]
[LABEL]
[PCL *format*]
[NOREC]
[NONAME]
[NOSKIP]
[NOSAMETO]
[OCTAL | HEX | DECIMAL]
[CHAR]
[LEFTJUSTNUM]
[RIGHTJUSTNUM]
[TIME *format*]
[FILE *name* APPEND RECLEN *size]*
[LP]
[DEVICE *name*]

Report selected records to Suprlist file, defaulting to $stdlist. Report selected records to $stdlist to an LP device or to a file using the FILE option and control the size with the RECLEN option. Standard produces a

columnar report, but the default is either a formatted listing or Octal/Char if the file is unstructured. Use Title and Heading to customize the listing. Record prints on attached printer, and Duplex prints two sided.

```
>list standard record {to attached printer}
>list stand title "Overdue Accounts"
```

LISTREDO [*start*[/*stop*] | [ALL | @] *string*] [;ABS | ;REL | ;UNN] [;OUT *file*]

Display previous commands; ",," is shortcut. (Default: last 20 commands)

```
>listredo 10/40
>listredo input {all Input commands}
```

Numrecs *number* | *percentage*%

Specify size of input, output and Sortscr files as an absolute number of entries or as a percent of input size. Required for input tape files.

```
>numrecs 100000
>numrecs 5%        {5% of the input}
```

OPen ALLBASE dbename owner
ORACLE username password

Open an SQL database. Allbase is supported on MPE and HP-UX. Oracle is supported on HP-UX only.

```
>open allbase inventory anne
>open oracle scott tiger
>open oracle scott/tiger@machine
```

Output *file* [*format*] [APPEND | ERASE | TEMP]

Define the name of the output file as one of the following: a new disc file (default), an existing disc or KSAM file (Append or Erase option), "*" for $stdlist, a reference to a :File equation (*name), or =Input to sort a file into itself. If you use List, Put, or Total, output defaults to $null. Output produces the same record format as the input source (adjusted by Extract commands), unless you override with format keywords:

DATA	default
ELSE	Records not qualified by if condition
KEY	sort keys only
PRN	PC file format
QUERY	self-describing
LINK	better self-describing format
ASCII	convert from numeric
DISPLAY	convert to display
NUM	J2 input record number only
NUM,KEY	J2 input record number & sort keys
NUM,DATA	J2 input record number & data record
NUM,QUERY	"numbers" format
NOLF	Do not write out line feeds to end of record
LF	Write out line feeds to end of record

Converted ASCII fields have a trailing sign (usually blank for positive values). Size depends on the binary field's format:

E2 R2	12 bytes	E4 R4	23 bytes
I1 J1	06 bytes	I2 J2	11 bytes
I3 J3	16 bytes	I4 J4	20 bytes
K1	05 bytes	K2	10 bytes
Zn	n+1 bytes	Pn	n bytes

```
>output newfile          {build newfile}
>output newfile,temp     {build temp file}
>output *,ascii          {$stdlist display}
>output =input           {sort into itself}
>output cleanfl,erase    {existing file}
>output ksamfl,erase     {load KSAM file}
>output trans1,append    {append to file}
>output sdfile,link      {self-describing}
>output lotus,prn        {ready to download}
```

Put *set* [,[host][:service]/]database]

Put the output records to an Eloquence dataset by using DBPUT.

```
Put trans
Put dtrans,sample,5
Put dataset,:eloqdb/sample,5
put dataset,hostname.robelle.com:eloqdb/sample,5
```

Put *set* [,*base* [,*mode* [,*password*]]]

Put the output records to an IMAGE dataset by using DBPUT.

```
>put dtrans,actrec,4        {another base}
>get curmonth;put history   {same base}
```

Q ["*string*"]

Print a string on the CRT. (Default: print blank line)

```
>q "Sorting customer records" {quoted}
```

REDO [*start*[/*stop*]] | *string* | [ALL | @]

Redo command lines; modify using MPE control codes.

```
>redo input      {repeat previous Input command}
```

Reset [[ALL | @] | *command* [...]]

Reset aspects of the current task. Reset All resets all input and output commands, but not Define and Set options. (Default: Reset Delete, Sort, Key, If, List)

```
>reset if    {reset If command}
>reset all
```

SELect *statement*

Specify an input source with an SQL select statement. Some processing options can be specified on the Select statement or with other Suprtool commands.

Using SQL to sort:

```
>select * from user.acct@emp order by name
```

Using Suprtool to sort:

```
>select * from user.acct@emp
>sort name
```

Set *option-name value*

Enable/disable options. See Configuration Options on page 14. Verify Set shows current values.

```
>set statistics off
```

SOrt *field* [(*subscript*)] [DESCending]

Specify a field or a Defined field as a sort field. For compound items, the first sub-item is the default.

```
>sort CustNumber     {default ascending sort}
>sort total desc     {descending order}
>sort StreetAddress(2)
```

TAble *tablename itemname keyword qualifier*

Build a table of values for testing in the If and Chain commands, or for extracting from the table with the Extract command. The tablename (up to 16 characters) must be unique. Itemname is a database item or a Defined field, or a field in a self-describing file. For compound items, Table uses the first sub-item. The keyword is one of ITEM, FILE, or SORTED. The format of qualifier depends on keyword: for ITEM, a list of explicit data values; for FILE and SORTED, a filename whose data is unsorted or sorted by itemname, followed by an optional HOLD keyword and an optional Data keyword indicating a list of data fields to be loaded from the self-describing file.

Keyword	**Qualifier**
ITEM	*value* [*value* ...]
FILE or SORTED	*filename* [HOLD] [DATA (*fieldlist*)]

```
>table select,ccode,item,"ABCD","FILM"
>chain m-customer,ccode=select

>table select,ccode,file,extract.file,hold
>if $lookup(select,ccode)

>table t,ccode,file,sdfile,data(updatefield)
>update
>extract dbfield=$lookup(t,ccode,updatefield)

>table t,ccode,file,sdfile,data(updatefield)
>if dbfield=$lookup(t,ccode,updatefield)
```

TRanslate TOUNREAD | TOREAD | *"^from:^to"*

Translate command allows you to specify a From and To-character in decimal notation, that can be used in the $translate function. Translate also has two keywords TOUNREAD, which makes a translate table to help make things unreadable, and TOREAD, which makes a translate table to make byte fields readable again.

```
>translate tounread
>ext name=$translate(name)
```

Total *field* [(*subscript*)] [*decplaces*]
$FILE *file* [APPEND | ERASE | TEMP]
$FILE $LIST

Compute sum total of a numeric field value in all selected records and print the result with a specified number of decplaces (default is 0 unless specified in Item command). The $file option prints the totals to a file or to the List device ($list). (Default: subscript = 1)

```
>total cust-balance,2
>total $file tothist,append
```

UPdate [CIUPDATE]

Update IMAGE or Eloquence fields specified by subsequent Extract commands.

```
>update
>extract status-code="OLD"
```

Use[Q] *filename*

Execute commands from a Text file or a Qedit file.

```
>use define6.usefile
```

USERpause "*string*"

Print prompt string; wait for any key.

```
>userpause "Press Return"
```

Verify [ALL | @ | VERSION | *command* [...]]

Show current specifications.

```
>verify input     {print name of input file}
```

Xeq

Perform the specified task, then wait for more commands.

More Suprtool Functions

O/S commands

```
>purge abc
>run myprog
>!rm abc
>!chmod 777 myfile
```

Calculations

```
>=312/4         {try "=?" for help}
```

Sort keys

```
>10,2,integer
```

Comments

```
>{this is a comment in braces}
```

Modify Functions In The Before Command

Printing characters replace; control keys edit. Move with the spacebar. Press the Return key after each function. ^ means Control.

^A	Append to end of line (also ^L).
^B	Insert before a column (^^ on console).
^D	Delete (default = end of line).
^G	Restart with original line.
^O	Overwrite characters (default).
^T	Stop current editing mode.
^A,^D	Delete from end of line, then add.

Calling Suprtool2

User programs can call Suprtool via the interface routine Suprtool2 (see St2usl.Pub.Robelle, St2xl.Pub.Robelle,/opt/robelle/lib). The user program calls Suprtool2 repeatedly, passing in Suprtool commands via a control record (COBOL definition in Cobol.Qlibsrc.Robelle). The last command passed to a user program must be Exit. Normally, Suprtool creates an output file which the user program then reads. To avoid typing mistakes,

copy the control record from the file. Be careful to :Prep or :Link program with Cap=PH.

Suprtool Fields

Suprtool recognizes fields in databases and self-describing files. The Define command can define new fields or redefine existing fields into new sizes or data-types so that you can name and use important parts of existing fields. Refer to the Defined field in other commands (e.g., Extract, If, etc.). Select one element of a compound field by specifying a subscript in parentheses. The first element is (1).

***field-name* (*subscript*)**

The default subscript is the first sub-item for Total, Define, Sort, and If, but the entire compound item for Extract. Table does not allow subscripts; it always uses one (1). The If command's syntax uses up to 3 subscripts, so you can refer to subfields without using Define (see user manual).

```
>define two,address(2),20,byte
>extract two      {20 bytes of 2nd line}
>define trans,partnum[7],2
>if trans="XT"    {last 2 bytes of X8}
```

Data-Types

The data-types for the Define and Key commands:

Byte	ASCII characters	packed	packed-decimal
Integer	two's complement	packed*	last nibble unused
Double	two's complement	display	zoned-decimal
Real	floating-point	logical	unsigned integer
Long	floating-point	character	for NLS
Ieee	IEEE floating-point		

The Suprtool definitions for the IMAGE data-types:

IMAGE Type	**Bytes**	**COBOL Declaration**	**SUPRTOOL Definition**
I1	2	S9(4)comp	>def a,1,2,integer
I2	4	S9(9)comp	>def a,1,4,double
I4	8	S9(18)comp	>def a,1,8,integer
J1	2	S9(4)comp	>def a,1,2,integer
J2	4	S9(9)comp	>def a,1,4,double
J4	8	S9(18)comp	>def a,1,8,integer
Un	n	A(n)	>def a,1,n,byte
Xn	n	X(n)	>def a,1,n,byte
Zn	n	9(n)	>def a,1,n,display
Pn	n/2	S9(n-1) comp-3	>def a,1,n/2,packed
K1	2		>def a,1,2,logical
K2	4		>def a,1,4,logical
R2	4		>def a,1,4,real
R4	8		>def a,1,8,real
E2	4		>def a,1,4,ieee
E4	8		>def a,1,8,ieee

The Suprtool definitions for PowerHouse data types:

IMAGE	**PowerHouse**	**Suprtool**
U or X	Character	Byte (Character for NLS)
R	Float (non-IEEE)*	Real or Long
E	Float (IEEE)*	IEEE
K	Integer Unsigned	Logical
J	Integer Signed	Integer or Double

P	Packed	Packed
Z	Zoned	Display

- * IEEE or Non-IEEE depends on whether "float IEEE" or "float NONIEEE" was declared under "System Options" in your System Dictionary
- Use QSHOW to view the attributes of a subfile.

The Suprtool definitions for the Allbase data types:

Allbase Data-Type	**Suprtool Data-Type**
Integer	Double
Smallint	Integer
Binary	Not Supported
Char	Byte
Varchar	Byte
Real	IEEE-32
Float	IEEE-64
Decimal	Packed
Numeric	Packed
TID	Not Supported
Date	Byte
Time	Byte
Datetime	Byte
Interval	Byte
Varbinary	Not Supported
Long binary	Not Supported
Long varbinary	Not Supported

The Allbase date and time fields are returned as byte-type fields with the following lengths:

Data-Type	**Length**
Date	10
Time	8
Datetime	23
Interval	8

The Suprtool definitions for the Oracle data types:

Oracle Data-Type	**Suprtool Data-Type**
Varchar2	Byte
Number	Varies, see Precision below*
Long	Not supported
Rowid	Not supported
Date	Oracle Date
Raw	Not supported
Long raw	Not supported
Char	Byte
Mislabel	Not supported

The following table describes the translation for each case:

***Precision**	**Decimal Places**	**Suprtool Data Type**
None	Any	8-byte IEEE
1-4	Zero	2-byte Integer
5-9	Zero	4-byte Integer
1-9	Non-zero	Packed-decimal
10-27	Any	Packed-decimal
28-38	Any	8-byte IEEE

You can change the Suprtool format for certain fields using the command Set Oracle Integer On, which when extracted will give the following Suprtool Data types:

Precision	Decimal Places	Suprtool Data-Type
1-4	Any	2-byte Integer
5-9	Any	4-byte Integer
10-27	Any	8-byte Integer

Record Selection

The If command lets you select a subset of the input source based on field values in the entries, and it allows you to combine tests. Operator precedence is parentheses, NOT, AND, OR, unary minus, multiply and divide, add and subtract.

field relop value {relop: = < > <= >= <>}
***field* == "*pattern*"** {see Pattern Matching on page 17}
***byte-field* = NUMERIC | ALPHA | SPECIAL**
field* = *value-list {If A=1,2,3}
field* = *field
(*expression*) {parentheses}
NOT *expression* {reverse test}
expression* AND *expression
expression* OR *expression
$INVALID(*date-field*)
$STDDATE(*date-field*)
$LOOKUP(*tablename*,*field*)
$LOOKUP(tablename,field,data)
***date-field* = $TODAY** {see Item command on page 6}
***date-field* = $DATE(*yy*/*mm*/*dd*)** {see Item command on page 6}
***word-field*.(*bit*:*count*)** {bit extracts}
{bits go from 0 to 15, left to right}
***byte-field* = ^7** {Control-G}
$READ
$NULL(*fieldname*)

Configuration Options

Override Suprtool's default options with Set commands.

Set Option Name	Sub-Option	Value	Default
ALLBASE	ROWS	number	100
ARITHMETIC		CLASSIC | IEEE	see manual
AMXW	PERFWRITE	ON|OFF	OFF *
AMXW	EXTERNALSD	ON| OFF	OFF *
BACKWARDCHAIN		ON| OFF	OFF
BASECLOSE		ON | OFF	OFF
BLOCKSIZE		size	<none>
BUFFER		size	14,336 or 24,576
CLEANCHAR		<string> "<null>"	<space> for no string
CURRENCYSYMBOL		<string>	$
DATE	CUTOFF	size	10
DATE	FORCECENTURY	ON | OFF	OFF
DATE	IFYY2000ERROR	ON | OFF	ON
DATE	MAPTOPHDATE8	ON | OFF	OFF
DECIMALSYMBOL		<string>	.
DEFER		ON | OFF	OFF
DUMPONERROR		ON | OFF	ON

EOFREAD		ON | OFF	OFF
EDITSTOPERROR		ON | OFF	OFF
EDITSIGNNEUTRAL		ON| OFF	OFF
ENDIANINT		ON | OFF	OFF
ENDIANLOG		ON | OFF	OFF
FASTREAD		ON | OFF	ON (OFF)*
FFISBE		ON | OFF	OFF
FILECODE		number	0
FILENAME	Help | Link | Edit | Hint | Export | Outcount	filename	
FIRSTREC		0 | 1	see manual
HINTS		ON | OFF	ON
HPUXCMDERR		<string>	<none>
IFCHECK		ON | OFF	ON
IGNORE		ON | OFF	OFF
INITEXTENTS		ON | OFF	OFF
INITNUMEXTENT		ON | OFF	OFF
INTERACTIVE		ON | OFF	depends
ITEMABBREVIATEDATE		ON | OFF	ON
ITEMLOCK		<string>	<none>
LABELLEDTAPEREWIND		ON | OFF	ON
LIMITS	MPE	ON | OFF	ON
LIMITS	READONLY	ON | OFF	OFF
LIMITS	TABLE	size	1(CM)
LIMITS	TABLE	size	2,047(NM) 500(UX)
LIMITS	OVERRIDE	ON | OFF	ON
LOCK		0 | 1 | number	1
MAKEABSENT		ON|OFF	OFF
MAXNUMEXTENT		ON|OFF	OFF
NLS		number	0, Nldatalang
NUMBUG		ON | OFF	OFF
OPENMODE		number	1
ORACLE	ROWS	number	100
ORACLE	INTEGER	ON | OFF	OFF
ORACLE	OPENFIX	ON | OFF	OFF
ORACLE	PASSSHIFT	ON | OFF	ON
ORACLE	SPACENULL	ON|OFF	OFF
ORACLE	ZERONULL	ON | OFF	OFF
PATTERN		NEW | OLD	NEW
PREFETCH		number	0 (MPE/iX)
PRIVMODE		ON | OFF	ON
PROGRESS	PERCENT	number	5
PROGRESS	MINIMUM	records	10,000 (MPE V); 50,000 (MPE/iX)
PROMPT		character	>
QUOTECHAR		Character	None
REALMAP		ON | OFF	ON
RECOVER		ON | OFF	OFF
REDO		filename	<temp>
SDEXTNAME		ON | OFF	OFF
SDITEMNOEXT		ON | OFF	OFF
SDINBYPASS		ON | OFF	OFF
SDOUTISBE		ON | OFF	OFF
SMARTSPLIT		ON | OFF	OFF
SQLTOFFBE		ON | OFF	OFF
SQUEEZE		ON | OFF | <none>	<none>
SORTFAST		ON | OFF	ON
SORTEXTMEM		ON | OFF	OFF

SORTMEMADDR		number	10000000
STATISTICS		ON | OFF	OFF
SUBSYSTEM		ON | OFF	OFF
SUSPEND		ON | OFF	varies
THOUSANDSYMBOL		<string>	,
USERLABELS		ON | OFF	ON
VARSUB		ON | OFF	OFF
VARSUBCOMPAT		ON | OFF	OFF
VARSUBDEBUG		ON | OFF	OFF
WARNINGS		ON | OFF	ON
XLTRIM		ON | OFF	OFF
LIST	TIME	format	1
LIST	DATE	0-4 0 = Sep 20, 1994 1 = 94/09/20 2 = 09/20/94 3 = 20/09/94 4 = 20 Sep 94	0
FORMFEED		ON | OFF	OFF
LIST	PCL	number (see below)	0

- Suprtool for HP-UX and Suprtool Open
- Suprtool for AMXW
- Fastread default is On for regular Suprtool for HP-UX and Off for the Dynamic Image loading version. (uses `ROBELLELIB_IMAGE` variable)

List PCL Number (+1,000 = ASCII, +2,000 = A4)	**Letter-size (cols/lines)**	**A4 paper (cols/lines)**
0 default font	80 x 60	
1 Landscape-tiny	175 x 60	188 x 58
2 Landscape-Courier	100 x 45	110 x 43
3 Standard Courier	80 x 60	77 x 64
4 Portrait-tiny	132 x 80	128 x 85
5 Courier A4 "tight"	80 x 60	80 x 64
6 Landscape-legal-tiny	223 x 60	223 x 60

Ways to Run Suprtool/MPE

:Run Suprtool.Pub.Robelle [;parm=value] [;info="string"]

Parm=	**Meaning**
1,2	Not used
4	Execute Info = string
8	Repeat Info = string on every activate
16	Copy file input to output
32	Default Set Suspend to Off
64	Verify Exit with user

Job Control Words (JCW)

Suprtool sets the system JCW to a fatal state when Suprtool fails in a batch job. Suprtool sets a JCW named SuprtoolOutCount to the number of output records. SuprtoolOutCount has a maximum number of 65,535. On MPE/iX, Suprtool sets a variable named SuprtoolFullCount to the number of output records.

Suprmgr files

This usefile is executed every time Suprtool runs:

Suprmgr.Pub.Sys

/opt/robelle/suprmgr

Ways to Run Suprtool/UX

/opt/robelle/bin/suprtool [option]

Option	Meaning
-c	Execute specified command string.
-lw	Print any loader warnings (Debug Oracle Debug)
-v	Exit with verify.
-oc	Write count to specified file.

Pattern Matching

The If command can search a byte field for a pattern of characters.

if *bytefield* == "*pattern*" {match}

if *bytefield* >< "*pattern*" {does not match}

@	Zero or more characters (any)	&	Escape character
~	Zero or more blanks	!	Reserved for future use
?	One alphanumeric character	^	Reserved for future use
#	One numeric character		

```
>if item-desc >< "@bolt@"
>if address=="&#101@"     {look for # sign}
```

Suprlink

Suprlink can access multiple files, produce a sorted disc file with a composite record of related fields from up to 7 files, and feed the merged file into your report program. Suprlink accepts only one command per line, but commands can be continued on the next line with an ampersand (&). The prompt character is "+", not ">."

```
:run Suprlink.Pub.Robelle

/opt/robelle/bin/suprlink
```

Before

See Suprtool section, page 2.

DO

See Suprtool section, page 3.

Exit [ABORT | SUSPEND | XEQ]

Perform task specified, and return to O/S or parent process. (:Run Suprlink/MPE with Parm=64 to verify on exit.)

```
+exit            {default = Xeq}
+exit suspend    {stop without executing}
```

Form [*filename*]

Display the fields in a self-describing file.

```
+form         {default = show fields in the input file}
+form customer
```

Help [*command-name* | *keyword* [,*section*]]

Access the on-line user manual.

```
+help            {default is browse all}
+help input      {explain Input command}
```

Input *filename* [BY *key-field*]

Select the primary input source. There is an option to specify the key-field by which the file is sorted.

```
+input invoices by cust-no
```

Join *filename* [BY *link-keys* [FROM *input-keys*]] [REQUIRED | OPTIONAL]

Join two files that have multiple keys in both the input file and the Join file.

```
+join custfile
```

Link *filename* [BY *link-keys* [FROM *input-keys*]] [REQUIRED | OPTIONAL]

Link the input file to another link file, maximum of seven.

```
+link custfile
+link sales by customer-no
```

LISTREDO

See Suprtool section, page 8.

Output *filename* [TEMP] [ERASE] [DATA] [LINK]

Specify output file name and whether it is temporary.

```
+output custsale   {default file name = Output}
```

REDO

See Suprtool section, page 9.

Reset

Cancel the current task.

```
+reset           {reset everything}
```

Set *option-name value*

Set configurable options.

```
+set mapped on
+set statistics on
+set varsub on
+set warnings off   {batch only}
```

Use[Q] *filename*

Execute commands from a Text or Qedit file.

```
+use cap2.infile
```

Verify

Show current specifications.

```
+verify          {show everything}
```

Xeq

Perform the current Suprlink task.

```
+xeq
```

Ways to Run Suprlink/UX

/opt/robelle/bin/suprlink [option]

Option	Meaning
-v	Turn on Variable Substitution
-oc	Write count to specified file.
-cv	Turn on VarsubCompat

Dbedit Subsystem

Edit records in an IMAGE, Eloquence or Oracle (with IMAX library) database. Most Dbedit commands prompt for a key value, then process matching entries. Dbedit accepts one command per line. Command abbreviations are shown in capitals. The Dbedit prompt character is "#". The generic format of a Dbedit command is

command [file] [;option [;option]]

The *file* parameter consists of *dataset:fieldlist*. See page 21 for details.

Add [*file*] [;*options*]

Add new entries to a dataset manually.

```
#add m-customer          {add to master}
#add d-address;limit=1   {only 1 record}
```

Before

See Suprtool section, page 2.

Change [*file*] [;*options*]

Replace a key value in a master and all related details.

```
#change m-customer   {must be master}
```

Delete [*file*] [;*options*]

Remove selected entries from a dataset.

```
#delete m-cust      {prompts for key}
#d d-address;key=cust-no
```

DO

See Suprtool section, page 3.

Exit

Return control to the main part of Suprtool.

```
#exit          {leave Dbedit subsystem}
```

File [*file*] [;*options*]

Establish the current file and field list as a default for other commands. (Default: none)

```
#file d-address         {entire entry}
#file m-cust:cur-bal    {only 1 field}
```

Form [SETS | ITEMS | PATHS | *dataset* | *data-item* | *filename*]

Show information on items and sets of database. (Default: datasets in database or fields in current dataset)

```
#form sets          {list datasets}
#fo d-cust          {details on d-cust set}
```

Help [*command-name* | *keyword* [,*section*]]

Access the help file.

```
#help list   {explain List command}
#hq form     {quick summary of Form}
```

List [*file*] [;*options*]

Display entries from a dataset or a group of related datasets.

```
#list d-address      {prompts for key}
#l m-cust;related    {linked details too}
#l d-control;all     {serial dump}
```

LISTREDO

See Suprtool section, page 8.

Modify [*file*] [;*options*]

Change field values in a dataset.

```
#modify d-address
#m m-cust;updatekey     {critical fields!}
#m d-address;key=city   {alternate key}
```

Q [*string*]

Print a literal message on the screen. (Default: none)

```
#q Add a new customer to the files:
```

REDO

See Suprtool section, page 9

Set *option-name value*

Configure Dbedit options such as the prompt character or underlining input fields. See Dbedit Configuration Options on page 21.

```
#set reset off {retain Key = options}
```

Use[Q] *filename*

Do commands from a Keep or Qedit file. (Default: none)

```
#use selfile
```

Verify [ALL | BASE | DSET | SET | CIUPDATE]

Show the Dbedit specifications and options. (Default: Base, Dset, CIUpdate, changed Set values)

```
#verify all
```

Dbedit File Parameter

The file parameter consists of a dataset name with an optional list of fields. (Default: same as previous command)

***dataset* [: *field, ...*]**

You can use the :File command to set up the current values.

```
#delete m-customer
#list m-customer:name,address
```

Dbedit Command Options

The options come after the file parameter and can be combined with semicolons:

n	Limit prompts to n times.
ALL	Process an entire dataset.
KEY=field	Change search field prompt order.
LIMIT=count	Limit entries per key value.
RELATED	List related entries in linked datasets.
UNDER	Prompt with underlines.
UPDATEKEY	Modify search and sort fields.

Dbedit Configuration Options

Set Option-Name	**Value**	**Default**
LP	ON | OFF	OFF
PROMPT	character	#
QUIET	ON | OFF	OFF
RESET	ON | OFF	ON
UNDERLINE	ON | OFF	ON
VERIFY	ON | OFF	ON

```
>edit              {enter Dbedit first}
#set quiet on      {reduce screen output}
#set verify off    {don't list new records}
```

Dbedit Subcommands

Enter subcommands when Dbedit prompts for field values.

//	Stop the current command immediately (same as \\)
?	Describe the current field
<	Go back one field in the list (<3 for 3 fields)
<<	Return to the first field in the list
>	Go forward one field in the list (>3 for 3 fields)
>>	Skip the rest of the fields in the list
'	Use blanks for the field (useful in batch)
*	Use the last value for this field
[	Force what follows "[" to be a value, not a subcommand
@F	Search for field F (e.g., @bin-no)
=	Calculator

STExport

STExport reads a self-describing input file and applies formatting rules to create an output file, which is suitable for importing into other applications. STExport accepts only one command per line, but commands can be continued on the next line with an ampersand (&). The STExport prompt character is "$", not ">."

```
:run STExport.Pub.Robelle

/opt/robelle/bin/stexport
```

Before

See Suprtool section, page 2.

Columns FIXED | NONE

Specify whether fields are formatted into variable- or fixed-length columns.

Clean [SPECIAL | <string> <range>]

Specifies what characters to clean from byte type fields. Characters that match those defined with the Clean command, will be replaced by the value defined by Set CleanChar, which defaults to space.

```
$in mysdfile
$clean special,"^128:^190","^255","}"
$out prnfile
```

Date NONE | *date-format* ["*separator*"] | INVALID [ASTERISKS | NULL | "*string*"]

Specify a date format for all dates and how to process invalid dates.

DECimal PERIOD | COMMA

Specify which symbol will be used to indicate the decimal place in numeric fields.

DElimiter NONE | COMMA | TAB | "*string*"

Specify which delimiter character, if any, is to appear between each formatted field.

EScape delimeter quote eol "*string*"

The Escape command will take the defined delimeter, quote and Eol and escape with a "/", if found in any byte type field. This is for easier importing for some SQL Import programs.

```
escape delimeter quote eol "/"
```

DO

See Suprtool section, page 3.

Exit [ABORT | SUSPEND | XEQ]

Perform specified task, and return to O/S or parent process. (:Run STExport/MPE with Parm=64 to verify on exit.)

```
$exit           {default = Xeq}
$exit suspend   {stop without executing}
```

FLoating DEFAULT | FIXED *decimal-places* | SCIENTIFIC *decimal-places*

Specify the format and the number of decimal places for floating-point fields.

Form [*filename*]

Display the fields in a self-describing file.

```
$form          {default = show fields in the input file}
$form customer
```

HEAding NONE | FIELDNAMES | "*string*" | ADD "*string*"| COLUMN "*string*"|

Specify which heading, if any, is to appear as the first record of the output file.

HElp [*command-name* | *keyword* [,*section*]]

Access the on-line user manual.

```
$help            {default is browse all}
$help input      {explain Input command}
```

HTML NONE | PREFORMATTED | TABLE [TITLE "*string*"] [HEADING "*string*"]

Use HTML to format Web pages for either Internet or intranet applications.

```
$html table title "Product Listing"
```

Input *filename*

Select a file to read and format.

```
$input invoices
```

JSON NONE | OBJECT “string” | ONEPERLINE [INDENT <integer>] | [HEADER Create <filename> | HEADER Add “string” | HEADER Delete <filename> | HEADER Setfname <filename>] | [TAIL Create <filename> | TAIL Add “string” | TAIL Delete <filename> | TAIL Setfname <filename>]

Use JSON command to format Json files.

```
$json indent 12 header create jhead
```

LISTREDO

See Suprtool section, page 8.

Output * | *filename* [TEMP] [LF | NOLF] [ERASE]

Specify output file name and whether it is temporary.

```
$output custsale   {default file name = Output}
```

Quote NONE | DOUBLE | SINGLE

Specify which quote character, if any, is to be used around byte-type fields.

REDO

See Suprtool section, page 9.

Reset

Resets the Input and Output files, cancels the task in progress. Does not reset formatting commands such as Delimiter, Head, Spaces, etc.

```
$reset
```

Set *option-name value*

Set configurable options.

```
$set cleanchar " "
$set mapped on
$set sdexname on
$set statistics on
$set varsub on
$set warnings off  {batch only}
$set xmltagchar "_"
$set zonedfix on
```

SIgn NONE | FLOATING | LEADING | TRAILING

Specify what should be done with the sign character for numeric fields.

SPaces NONE | TRAILING

Specify whether byte-type fields have trailing spaces.

Use[Q] *filename*

Execute commands from a Text or Qedit file.

```
$use cap2.infile
```

Verify

Show current specifications.

```
$verify          {show everything}
```

Xeq

Perform the current STExport task.

```
$xeq
```

XML VERSION "*string*"
DOCTYPE "*string*" | *filename*
FILE "*string*"
RECORD "*string*"

Generate output consisting of well-formed XML output.

```
$xml
$xml doctype myfile.xml
```

Zero NONE | LEADING

Specify whether numeric fields have leading zeros.

Ways to Run STExport/UX

/opt/robelle/bin/stexport [option]

Option	Meaning
-v	Turn on Variable Substitution
-oc	Write count to specified file.
-cv	Turn on VarsubCompat

Rport

Rport reads a self-describing input file and applies formatting rules to create an output file in a report format. Rport accepts only one command per line, but commands can be continued on the next line with an ampersand (&). The Rport prompt character is "$", not ">."

```
:run rport.Pub.Robelle

/opt/robelle/bin/rport
```

Before

See Suprtool section, page 2.

Comma *fieldname,fieldname*

Specifies to put commas in a numeric field when it is converted to ascii.

Date NONE | *date-format* ["*separator*"] | INVALID [ASTERISKS | NULL | "*string*"]

Specify a date format for all dates and how to process invalid dates.

DECimal PERIOD | COMMA

Specify which symbol will be used to indicate the decimal place in numeric fields.

DO

See Suprtool section, page 3.

Dollar *fieldname,fieldname*

Specify the format for the dollar sign to appear in a numeric field.

Exit [ABORT | SUSPEND | XEQ]

Perform specified task, and return to O/S or parent process. (:Run STExport/MPE with Parm=64 to verify on exit.)

```
$exit           {default = Xeq}
$exit suspend   {stop without executing}
```

FLoating DEFAULT | FIXED *decimal-places* | SCIENTIFIC *decimal-places*

Specify the format and the number of decimal places for floating-point fields.

Form [*filename*]

Display the fields in a self-describing file.

```
$form       {default = show fields in the input file}
```

```
$form customer
```

HEAding NONE | FIELDNAMES | "*string*" | ADD "*string*"| COLUMN "*string*"|

Specify which heading, if any, is to appear as the first record of the output file.

HElp [*command-name* | *keyword* [,*section*]]

Access the on-line user manual.

```
$help           {default is browse all}
$help input     {explain Input command}
```

Hide *fieldname*

The Hide command tells Rport to not list a field in a report.

Input *filename*

Select a file to read and format.

```
$input invoices
```

LISTREDO

See Suprtool section, page 8.

Output * | *filename* [TEMP] [LF | NOLF] [ERASE]

Specify output file name and whether it is temporary.

```
$output custsale   {default file name = Output}
```

REDO

See Suprtool section, page 9.

Reset

Resets the Input and Output files, cancels the task in progress. Does not reset formatting commands such as Delimiter, Head, Spaces, etc.

```
$reset
```

Set *option-name value*

Set configurable options.

```
$set mapped on
$set maxlen on
$set statistics on
$set varsub on
$set warnings off  {batch only}
$set xmltagchar "_"
$set zonedfix on
```

SIgn NONE | FLOATING | LEADING | TRAILING

Specify what should be done with the sign character for numeric fields.

SIZe fieldname

Specified the total size of the field when converted from numeric to ascii.

SUbtotal fieldnames

Specifies what field to print a subtotal line on based on SD sort information.

Title Line 1 | 2

LEFT | LEFTMID | CENTER | RIGHT | RIGHTMID

RPNAME | RPDATE * | RPCOMPANY | RPTITLE

RPRUNTIME * | RPPAGENO* | RPGENERIC1 |

RPGENERIC2

Allows for user to specify up to two Title Lines for a given report, consisting of five areas and eight components.

TOtal fieldnames

Specifies what field to print a total line for.

Use[Q] *filename*

Execute commands from a Text or Qedit file.

```
$use cap2.infile
```

Verify

Show current specifications.

```
$verify          {show everything}
```

Xeq

Perform the current STExport task.

```
$xeq
```

Zero NONE | LEADING

Specify whether numeric fields have leading zeros.

Ways to Run Rport

/opt/robelle/bin/rport [option]

Option	Meaning
-v	Turn on Variable Substitution
-oc	Write count to specified file.
-cv	Turn on VarsubCompat

Speed Demon

For large datasets, replace DBGET mode-2 calls in your programs with Speed Demon calls (native or compatibility mode), which should be 2-5 times faster than DBGET. Restrictions: database cannot be open in modes-3 or -7, requires full-read access, cannot be remote, and cannot update or delete after Get. See Cobol2.Qlibsrc.Robelle for sample code.

SPDEEXPLAIN *status*

Print a three-line message based on the status array.

SPDEDBINIT *base, set, mode, status, control, list*

Initialize Speed Demon and specify what dataset to read. For partial field lists, specify mode-2. If your dataset may change during the read, specify mode-3 to read to end-of-file.

SPDEDBSCAN *base, status, buffer, dummy*

Read the next entry in the set specified in SPDEDBINIT, returning it in the buffer.SPDEDBSHUT *base, set, mode, status, dummy*

Mode-1: Close the Speed Demon environment (this must be done before reading another dataset). Mode-2: Close the environment and print statistics about the read operation.

SUPRTOOL TIPS AND TECHNIQUES

Converting Numeric Data Types

Suprtool does not change the data type in the input file, but it can change the data type as it copies numeric data to the output file.

To convert a field from Integer to Packed:

```
define my-packed-field,1,size,packed
extract my-packed-field = integer-field
```

To convert a numeric field from ASCII to binary:

```
define ascii-field,start,length,display
define binary-field,1,size,integer
extract binary-field = ascii-field
```

To convert a numeric field from ASCII to binary with sign and decimal place :

```
define ascii-field,start,length,display
define binary-field,1,size,integer
extract binary-field = $number(ascii-field)
```

Update Fields in A Dataset

Update a field in a dataset, using replacement values stored in a self-describing file. (Create the self-describing file using the Link option of Suprtool or Suprlink.) Load the self-describing file into a Suprtool table, then update the dataset field with the values loaded in the table. E.g., to update credit-balance with new values found in myfile:

```
get dataset
table t,acct-no,file,myfile,data(new-balance)
if $lookup(t,acct-no)
update
extract credit-balance = &
    $lookup(t,acct-no,new-balance)
xeq
```

Counting Values Found in A File

Use the Duplicate command to list all the different values in a field, and to count how many times each value occurs. E.g., to list how many shipments we have made, by state:

```
get ship-dataset
sort state-code
extract state-code
duplicate none keys count
list standard
xeq
```

Subtotaling A Field

Use the Duplicate command to total a field based on a sort key. E.g., to report the sales figures by date:

```
get invoices
sort invoice-date
extract invoice-date
duplicate none keys total sales-amount
list standard
xeq
```

Searching For Records in One File Based on Selection Criteria in Another File

E.g., to select all invoices for customers in California, when state-code is not in the invoices file:

```
get customer-master
if state-code = "CA"
extract acct-no
output myfile,link
xeq
get invoices
table t,acct-no,file,myfile
if $lookup(t,acct-no)
```

Finding the Intersection of Two Files

If a Suprlink input record does not have a matching link record, that input record does not appear in the output file. Use this to find the "intersection" of two files. E.g., list all the invoices over $1,000 for customers in California:

```
get invoices
item sales-total,decimal,2
if sales-total > 1000.00
sort cust-no
output inv1000,link
xeq

get customer-master
if state-code = "CA"
sort cust-no
output custca,link
xeq

link   input inv1000
link   link custca
link   output cagt1000
link   xeq
```

Suprlink Tips and Rules-of-Thumb

- You can have only one Input file, but up to seven Link files.
- All the files must be self-describing, created using the Link or Query option.
- All the files must be sorted by a common linking field.

- The common linking field must have the same size, data type, and content in all the files.
- Input records without matching link records will be dropped from the output file, unless the Optional keyword is used on the Link command.
- In general, the input file is made up of "detail-like" records, and the link file is made up of "master-like" records, even though they may not actually come from masters and details.
- Specifically, the input file will be the file that has multiple records with the same key value (the common linking field), and the link file will be the file that has only one record with a given key value.
- To improve speed, try to reduce the files before feeding them to Suprlink. When creating the files with Suprtool, select only the desired records using the If command, and select only the needed fields using the Extract command.
- If both the Input file and the Link file have multiple key values then you should use the Join command instead of the Link command.

Dynamically Loading Libraries

Suprtool for HP-UX, AMXW and Open versions dynamically load the required Eloquence and Oracle routines on startup. Suprtool will only print a warning on startup unless you run Suprtool with the –lw option. Suprtool requires two Eloquence libraries, namely: libimage3k.sl and libeqdb.sl. and one from Oracle, typically libclntsh.sl. The optional version that dynamically a third-party Image Replacement library needs to have the `ROBELLELIB_IMAGE` variable set to the fully qualified path name of the replacement variable.

Suprtool for AMXW and Suprtool for HP-UX use two methods for dynamic loading. By default, Suprtool will use shl_load to load the necessary routines which will look in the directories defined in the SHLIB_PATH. If you have the ROBELLE_DYN_LOAD variable set to Y, then Suprtool will use dlopen, which will look at LD_LIBRARY_PATH first when deciding where to look for the library files that it requires.

For example to insure that Suprtool resolves the library loads you can set the SHLIB_PATH (or LD_LIBRARY_PATH) system wide in your /etc/profile file in the following manner:

```
export
SHLIB_PATH=$ORACLE_HOME/lib32:/opt/eloquence/8.2/lib/hpux32
```

If you do not have the SHLIB_PATH or (LD_LIBRARY_PATH) variable set to a value where the libraries can be found, Suprtool will then try to load from their default names locations. The Oracle interface will first try to load libclntsh.so and then attempt to load libclntsh.sl from $ORACLE_HOME/lib32/.