

# LINFx\$ - Return Extended Program Library Information

The LINFx\$ system routine is used to return the details of an Extended Program Library (i.e. a Program Library created and maintained using the \$LIBX system utility).

## 1. Invocation

To obtain the details of an Extended Program Library code:

```
CALL LINFx$ USING fd lx
```

Where *fd* is the FD of the Program Library which must be closed when the routine is called, and will remain closed when the routine returns control.

The parameter *lx* is the name of a control block in which the information will be returned:

01	LX BASED	<i>ptr</i>	
02	LXTIT	PIC X(30)	* LIBRARY TITLE
02	LXDATE	PIC 9(6) COMP	* DATE LAST UPDATED
02	LXSIZE	PIC 9(9) COMP	* EXTENT SIZE
02	LXSPAR	PIC 9(9) COMP	* SPARE SPACE
02	LXNOME	PIC 9(4) COMP	* NUMBER OF ENTRIES
02	LXENTRY	OCCURS 1000	
03	LXMEM	PIC X(8)	* LIBRARY MEMBER NAME
03	LXMDAT	PIC 9(6) COMP	* MEMBER DATE
03	LXFLAG	PIC 9(2) COMP	* STUB PRESENT FLAG
03	LXMSIZ	PIC 9(6) COMP	* MEMBER SIZE
03	LXTTL	PIC X(30)	* MEMBER TITLE
02	LXTERM	PIC X	* TERMINATOR

## 2. STOP Codes and Exception Conditions

The following STOP codes may be generated by LINFx\$:

STOP code	Description
24401	The target Program Library was not closed.

The following EXIT codes may be returned by LINFx\$:

EXIT code	\$\$COND	Description
24401	1	The Program Library could not be opened.
24402	2	The Program Library could not be read.

24403	3	The file specified is not a valid \$LIBX library (e.g. a \$LIB library has been specified).
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### 3. Programming Notes

LINFx\$ is only available with GSM SP-27, or later.

LINFx\$ only returns information from an Extended (\$LIBX) Program Library. An attempt to use LINFx\$ on a \$LIB library will result in an EXIT 24403.

The LX control block must be allocated in a memory page allocated using the FREEEX\$ routine. See the example below.

### 4. Examples

```

PROGRAM LINFx
DATA DIVISION
*
FD FD1 ORG UNDEFINED
ASSIGN TO UNIT FD1UNIT FILE FD1FILE
*
01    FM
      02 FMFUN      PIC 9 COMP      * ALLOCATE MEMORY PAGE
        VALUE      0
      02 FMSIZE     PIC 9(6) COMP   * SIZE OF LINFx$ LX BLOCK
        VALUE      45044
      02 FMPTR      PIC PTR        * POINTER RETURNED HERE
      02 FMNAME     PIC X(8)       * DON'T CARE
*
01    LX          BASED FMPTR
      02 LXTIT     PIC X(30)       * LIBRARY TITLE
      02 LXDATE    PIC 9(6) COMP   * DATE LAST UPDATED
      02 LXSIZE    PIC 9(9) COMP   * EXTENT SIZE
      02 LXSPAR    PIC 9(9) COMP   * SPARE SPACE
      02 LXNOME    PIC 9(4) COMP   * NUMBER OF ENTRIES
      02 LXENTRY   OCCURS 1
        03 LXMEM   PIC X(8)       * LIBRARY MEMBER NAME
        03 LXMDAT  PIC 9(6) COMP   * MEMBER DATE
        03 LXFLAG  PIC 9(2) COMP   * STUB PRESENT FLAG
        03 LXMSIZ  PIC 9(6) COMP   * MEMBER SIZE
        03 LXTTL   PIC X(30)       * MEMBER TITLE
      02 LXTERM    PIC X          * TERMINATOR
*
77    X-10        PIC X(10)
77    Z-94C       PIC 9(4) COMP
77    I           PIC 9(4) COMP
*
01    MEMBER
      02 NUMB      PIC 9(4)
      02 FILLER    PIC X(2)
        VALUE     " "
      02 NAME      PIC X(8)
      02 FILLER    PIC X(2)
      02 DATE      PIC X(10)
      02 FILLER    PIC X(2)
      02 SIZE      PIC 9(6)
      02 FILLER    PIC X(2)
      02 TITLE     PIC X(30)
*
77    X-1         PIC X
*
PROCEDURE DIVISION
*
      CALL FREEEX$ USING FM

```

## LINFx\$ - Return Extended Program Library Information

```
ON EXCEPTION
  DISPLAY "CANNOT ALLOCATE FREE MEMEORY"
  STOP RUN
END
DISPLAY "PROGRAM LIBRARY"
CALL FILE$ USING FD1
ON EXCEPTION STOP RUN
CALL LINFx$ USING FD1 LX
ON EXCEPTION
  DISPLAY "EXCEPTION FROM LINFx$"
ELSE
  DISPLAY "Date library last updated = "
  CALL DT-DL$ USING LXDATE X-10
  DISPLAY X-10 SAMELINE
  DISPLAY "Extent size = "
  DISPLAY LXSIZE SAMELINE
  DISPLAY "Spare space = "
  DISPLAY LXSPAR SAMELINE
  DISPLAY "Number of entries = "
  MOVE LXNOME TO Z-94C
  DISPLAY Z-94C SAMELINE
*
  DISPLAY "Key <CR> to display members"
  ACCEPT X-1 NULL
  END
*
  IF Z-94C ZERO
    DISPLAY "LIBRARY IS EMPTY"
  ELSE
    DO FOR I = 1 TO Z-94C
      MOVE I TO NUMB
      MOVE LXMEM(I) TO NAME
      CALL DT-DL$ USING LXMDAT(I) DATE
      MOVE LXMSIZ(I) TO SIZE
      MOVE LXTTTL(I) TO TITLE
      DISPLAY MEMBER
    ENDDO
  END
  END
  CALL FREEEX$ * DE-ALLOCATE MEMORY PAGE
  DISPLAY "Key <CR> to continue"
  ACCEPT X-1 NULL
  END
  STOP RUN
ENDPROG
ENDSOURCE
```

## 5. Copy-Books

None.

## 6. See Also

LINFO\$     Return traditional Program Library Information  
FREEEX\$    Allocate 32-bit memory page