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-- file TableDefs.Mesa
-- last modified by Satterthwaite, March 21, 1978 11:45 AM

DIRECTORY
  AltoDefs: FROM "altodefs";

TableDefs: DEFINITIONS =
  BEGIN

    TableSelector: TYPE = CARDINAL;

    TableBase: TYPE = [0..AltoDefs.VMLimit];
    TableFinger: TYPE = POINTER TO TableBase;
    TableLimit: CARDINAL = 400008;
    TableIndex: TYPE = POINTER [0..TableLimit);
    OrderedTableIndex: TYPE = ORDERED POINTER [0..TableLimit);

-- allocation from the tables as stacks

    Allocate: PROCEDURE [table: TableSelector, size: CARDINAL] RETURNS [OrderedTableIndex];
    TableBounds: PROCEDURE [table: TableSelector] RETURNS [base: TableBase, size: CARDINAL];
    TrimTable: PROCEDURE [table: TableSelector, size: CARDINAL];

-- allocation from free list (first table only)

    chunktype: TableSelector = FIRST[TableSelector];

    GetChunk: PROCEDURE [size: CARDINAL] RETURNS [TableIndex];
    FreeChunk: PROCEDURE [i: TableIndex, size: CARDINAL];

-- notification of repacking

    TableNotifier: TYPE = PROCEDURE [base: DESCRIPTOR FOR ARRAY --TableSelector-- OF TableBase];

    AddNotify: PROCEDURE [proc: TableNotifier];
    DropNotify: PROCEDURE [proc: TableNotifier];

-- initialization and termination

    Region: TYPE = RECORD [origin, size: CARDINAL];

    InitializeTable: PROCEDURE [region: Region, divisions: CARDINAL];
    EraseTable: PROCEDURE;

    TableOverflow: SIGNAL RETURNS [Region];
    TableFailure: ERROR [table: TableSelector];

  END.
```