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-- File: StringDefs.Mesa
-- Edited by Sandman on July 13, 1977 7:35 AM

DIRECTORY AltoDefs: FROM "altodefs";

DEFINITIONS FROM AltoDefs;

StringDefs: DEFINITIONS =
  BEGIN

    StringHeaderSize: PRIVATE INTEGER = 2;

    CharsPerWord: INTEGER = AltoDefs.CharsPerWord;
    charlength: INTEGER = AltoDefs.charlength;
    CharsPerPage: INTEGER = AltoDefs.CharsPerPage;
    LogCharsPerPage: INTEGER = AltoDefs.LogCharsPerPage;

    SubStringDescriptor: TYPE = RECORD [
      base: STRING,
      offset, length: CARDINAL];

    SubString: TYPE = POINTER TO SubStringDescriptor;

    Overflow: SIGNAL;
    InvalidNumber: SIGNAL;
    StringBoundsFault: SIGNAL [s:STRING] RETURNS [ns:STRING];

    WordsForString: PROCEDURE [nchars:INTEGER] RETURNS [INTEGER];

    AppendChar: PROCEDURE [s:STRING, c:CHARACTER];
    AppendString: PROCEDURE [to,from:STRING];
    EqualString, EquivalentString: PROCEDURE [s1,s2:STRING] RETURNS [BOOLEAN];

    AppendSubString: PROCEDURE[to:STRING, from:SubString];
    EqualSubStrings, EquivalentSubStrings: PROCEDURE [s1,s2:SubString] RETURNS [BOOLEAN];
    DeleteSubString: PROCEDURE [s:SubString];
    StringToDecimal: PROCEDURE [STRING] RETURNS [INTEGER];
    StringToOctal: PROCEDURE [STRING] RETURNS [UNSPECIFIED];
    StringToNumber: PROCEDURE [STRING,CARDINAL] RETURNS [UNSPECIFIED];

    -- routines for bcpl strings

    bcplStringHeaderSize: PRIVATE INTEGER = 1;

    bytepair: PRIVATE TYPE = MACHINE DEPENDENT RECORD [left,right:CHARACTER];

    bcplSTRING: TYPE = PRIVATE MACHINE DEPENDENT RECORD[
      length: BYTE, body: CHARACTER,
      rest: ARRAY [1..127] OF bytepair];

    bcplStringOverflow, mesaStringOverflow: SIGNAL;
    WordsForBcplString: PROCEDURE [n:INTEGER] RETURNS [INTEGER];
    MesaToBcplString: PROCEDURE [s:STRING, t:POINTER TO bcplSTRING];
    BcplToMesaString: PROCEDURE [t:POINTER TO bcplSTRING, s:STRING];

  END.
```