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/*+1 =====*/
/*  MODULE          TBM.H          */
/*=====*/
/*  FUNCTION        Headerfile for module TBM.C (Tuned Boyer-Moore search)
 *                   #include this file to access the PUBLIC functions in TBM.C
 *
 *  SYSTEM          Standard (ANSI/ISO) C
 *                   Tested on PC/MS DOS v.3.3 & UNIX SYS V.3
 *
 *  SEE ALSO        Module TBM.C
 *
 *  PROGRAMMER      Allan Dystrup
 *
 *  COPYRIGHT       (c) Allan Dystrup, Kommunedata I/S, Mar. 1992
 *
 *  VERSION         $Header: d:/cwork/index/RCS/key.h 1.5 92/03/03 11:25:04
 *                   Allan_Dystrup Exp Locker: Allan_Dystrup $
 *
 *                   -----
 *
 *                   $Log: tbm.h $
 *
 * Revision 1.4  92/03/13  13:34:23  Allan_Dystrup
 * linted DOS/UX
 *
 * Revision 1.3  92/03/13  11:15:46  Allan_Dystrup
 * integrated UCASE
 *
 * Revision 1.2  92/03/11  14:53:51  Allan_Dystrup
 * hack'ed UCASE
 *
 *=====*/

#ifndef _TBM_H          /* Make sure tbm.h is included once */
#define _TBM_H         /* Matching #endif is at end-of-file */

/*=====*/
/*                   Setup for DEBUG [ON|OFF]          */
/*=====*/
#ifdef DEBUG
#define PRIVATE
#define D(x)          x
#include <assert.h>
#else
#define PRIVATE      static
#define D(x)         /* ignore */
#define assert(x)   /* ignore */
#endif /* DEBUG */

#define PUBLIC      /* ignore */
#define BYTE        unsigned char
#define WORD        unsigned int
#define DWORD       unsigned long
#define ASIZE       256    /* Size of alphabet : extended (8-bit) ASCII */

/*=====*/
/*                   Compile time configuration options for TBM          */
/*=====*/
#define TBM_FQ      /* Uncomment to include guard-test based on char freq. */
#define DANISH      /* Choose character freq. table from [ENGLISH | DANISH] */
#define TBM_TF      /* Uncomment to force boolean return over match count */
#define TBM_UC      /* Uncomment to force uppercase match */

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#ifdef TBM_FQ
/*=====*/
/*          Frequency-array for chars in alphabet          */
/*=====*/
static float freq[ASIZE] =

#ifdef ENGLISH
/* Frequencies of letters in English written text (case insensitive) */
/* ... */
/* Encoded in IBM Code Page 437 (US:United States) */
{
/*-----0-----1-----2-----3-----4-----5-----6-----7---*/
/*00*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*08*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*10*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*18*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*20*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*28*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*30*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*38*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*40*/ 0.0f, 8.9f, 2.3f, 4.5f, 3.2f,11.1f, 1.5f, 2.4f,      /*@-G*/
/*48*/ 2.9f, 7.8f, 0.2f, 1.1f, 5.5f, 3.2f, 6.8f, 6.9f,      /*H-O*/
/*50*/ 3.1f, 0.2f, 7.4f, 5.6f, 7.1f, 3.6f, 1.0f, 1.1f,      /*P-W*/
/*58*/ 0.3f, 2.0f, 0.2f, 1.5f, 1.5f, 1.5f, 0.0f, 0.0f,      /*X-□?*/
/*60*/ 0.0f, 8.9f, 2.3f, 4.5f, 3.2f,11.1f, 1.5f, 2.4f,      /*`-g*/
/*68*/ 2.9f, 7.8f, 0.2f, 1.1f, 5.5f, 3.2f, 6.8f, 6.9f,      /*h-o*/
/*70*/ 3.1f, 0.2f, 7.4f, 5.6f, 7.1f, 3.6f, 1.0f, 1.1f,      /*p-w*/
/*78*/ 0.3f, 2.0f, 0.2f, 1.5f, 1.5f, 1.5f, 0.0f, 0.0f,      /*x-□?*/
/*80*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*88*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*90*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*98*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*A0*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*A8*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*B0*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*B8*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*C0*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*C8*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*D0*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*D8*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*E0*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*E8*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*F0*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*F8*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f
};
#endif /*ENGLISH*/

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#ifdef DANISH
/* Frequencies of letters in Danish written text (case insensitive) */
/* cf. "Nyt fra Sprogn'vnet", Nr.4 Matr's 1970 */
/* Encoded in IBM Code Page 850 (Multilingual) */
{
/*-----0-----1-----2-----3-----4-----5-----6-----7---*/
/*00*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*08*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*10*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*18*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*20*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*28*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*30*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*38*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*40*/ 0.0f, 5.6f, 1.4f, 0.1f, 6.7f,16.6f, 2.6f, 4.4f, /*@-G*/
/*48*/ 2.1f, 5.8f, 0.6f, 3.2f, 5.1f, 3.7f, 7.7f, 4.5f, /*H-O*/
/*50*/ 1.3f,0.02f, 8.0f, 5.5f, 7.2f, 1.6f, 2.7f,0.02f, /*P-W*/
/*58*/0.02f, 0.6f,0.02f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, /*X-□*/
/*60*/ 0.0f, 5.6f, 1.4f, 0.1f, 6.7f,16.6f, 2.6f, 4.4f, /*`-g*/
/*68*/ 2.1f, 5.8f, 0.6f, 3.2f, 5.1f, 3.7f, 7.7f, 4.5f, /*h-o*/
/*70*/ 1.3f,0.02f, 8.0f, 5.5f, 7.2f, 1.6f, 2.7f,0.02f, /*p-w*/
/*78*/0.02f, 0.6f,0.02f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, /*x-□*/
/*80*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 1.3f, 0.0f, /*t*/
/*88*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 1.3f, /**/
/*90*/ 0.0f, 0.8f, 0.8f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, /*'*/
/*98*/ 0.0f, 0.0f, 0.0f, 0.9f, 0.9f, 0.0f, 0.0f, 0.0f, /*>*/
/*A0*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*A8*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*B0*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*B8*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*C0*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*C8*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*D0*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*D8*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*E0*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*E8*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*F0*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f,
/*F8*/ 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f, 0.0f
};
#endif /*DANISH*/
#endif /*TBM_FQ*/

#ifdef TBM_UC
#define UCASE(x) bDKupper(x) /* Convert to upper case */
#else
#define UCASE(x) x /* Pass on without conversion */
#endif /*TBM_UC*/

/*=====*/
/* Public function prototypes */
/*=====*/
PUBLIC void vBuildTBM(BYTE *pb, int len);
PUBLIC int iRunTBM(BYTE *base, int n);

#endif /* #ifdef _TBM_H */
/* End of module tbm.h */
/*=====*/

```