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/*
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5    Description:
        - reads the accounting entries from the XML data file into linked list for
        further processing
        - populates accounts into linked list
        - calculates trial balance

10    echo PATH=$PATH:~/Software/c
*/

#include <stdio.h>
#include <stdlib.h>
15  #include <string.h>
#include <libxml/encoding.h>
#include <libxml/xmlwriter.h>
#include "ledger.h"
#include "gui.h"

20  #if defined(LIBXML_WRITER_ENABLED) && defined(LIBXML_OUTPUT_ENABLED)

#define MY_ENCODING "UTF-8"
char *file_name = "/home/e403sa/Software/c/acct_proj/journal.xml";
25  int main(int argc, char **argv)
{
    JournalEntry **ptr, *start;

30    void printEntries          (JournalEntry *);
    void printJournal          (JournalEntry **);
    void parseDoc               (char *, JournalEntry*);
    void readJournal            (char *, JournalEntry **);
    void parseEntry             (xmlDocPtr, xmlNodePtr, JournalEntry *);
35    void readEntry             (xmlDocPtr, xmlNodePtr, JournalEntry **);
    void populateAccounts       (JournalEntry *, JournalEntry *, JournalEntry*);
    char *getDRAcctNum          (JournalEntry *);
    JournalEntry* findAccount    (JournalEntry *, int);
    void addChartAccount         (JournalEntry *, int);
40    void addChartAccount2       (JournalEntry *, JournalEntry*, int);
    void addEntry               (JournalEntry *, JournalEntry);
    void getTrialBalance        (JournalEntry *, JournalEntry *);

    // Initialize structs.
45    JournalEntry *je_xml, *je_head, *chart;
    je_xml = (JournalEntry*)malloc(sizeof(JournalEntry));
    je_xml->next = NULL;
    je_xml->prev = NULL;

50    chart = (JournalEntry*)malloc(sizeof(JournalEntry));
    chart->dr_acct = 0.00;
    chart->next = NULL;
    chart->prev = NULL;
    start = chart;

55    ptr=&je_xml;

    printf ("addresses dump:\n");
    printf ("**head:\t\t0x%X\n",    *ptr);
60    printf ("head:\t\t0x%X\n",        je_xml);

    printf ("\nParsing entries from XML file.\n");

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65 // Read General Journal from XML datafile (double pointer).
   readJournal (file_name, ptr);
   printf ("\n");
   printf ("#   %sNode\tDate\t\tDR\tCR\t\t%10s", bold, white, "Amount\n");
   for (int n=0; n<115; n++)
       printf ("%s%s=%s", normal, yellow, none);
70   printf ("\n");
   strcpy (je_xml->entry_date, "____JG____");
   strcpy (je_xml->dr_acct_number, "XXXX");
   strcpy (je_xml->cr_acct_number, "XXXX");

75   je_xml->amount=t1;
   //printf ("0x%X\n", je_xml);
   // send pointer.
   //printEntries(je_xml);
   // set address from double pointer.
80   printEntries (*ptr);
   // send double pointer.
   //printJournal(ptr);
   printf ("%sTOTAL: \t%10.2f%s\n", bold, white, t1, none);

85   i = 0;
   printf ("\nchart node: 0x%X\tnext: 0x%X\n", chart, chart->next);
   strcpy (start->entry_date, "____TB____");
   populateAccounts (start, je_xml, chart);
   getTrialBalance (je_xml, chart);
90   printEntries (chart);
   }

   #else
   int main(void) {
95       fprintf (stderr, "Writer or output support not compiled in\n");
       exit (1);
   }
   #endif

```