CE 242 - Data Structures and Algorithms
Spring 2009 - Ahmet Ardal
Lab Assignment 5

1. A binary search tree can be used as a dictionary data structure (See: http://en.wikipedia.org/wiki/Associative_array). You will find a text file named "forex-terms-data.txt" provided with this homework's source code. That file contains lines of dictionary-like entries. Each line consists of a word and its definition separated by a colon(:).
Using that data file and BTree module write a program as follows:

- Read entries from the data file,
- For each line you read, split it into two tokens as the word and its definition, then create a WordDef struct object and copy the word and the definition into its corresponding members (more information about the WordDef structure is available in the source code),
- Create a new binary search tree (BTree) and insert each WordDef object you created into that tree as you create them.
- After constructing the tree or -in other words- the dictionary, read strings from console and search for them in the dictionary, if an entry is found print its definition. Continue reading words and searching for them until user enters a string like this "---".
- Finally, traverse the tree and delete WordDef objects each node of the tree contains, and destroy the tree. (Hint: use `BTreeForeachAsc()` function to accomplish this)

2. Write two functions, one traverses the dictionary (the binary search tree you created in the preceding question) in ascending order and prints each word plus its definition. The second one should also traverse the dictionary but this time in descending order and should print each word with its definition during the traversal.

Function prototypes:

```
void printDictAscending(TNode *pRoot);
void printDictDescending(TNode *pRoot);
```

3. Write a callback function to use with `BTreeForeachAsc()` function in order to print words between two specified words. Write a program that reads two words from console and prints the words between them.