Class exercise: Function pointers

COMP 40

September 21, 2009

Group

<table>
<thead>
<tr>
<th>Keeper of the record:</th>
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<td>Other group members:</td>
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Question

To solidify your grasp of function pointers, let’s assume that you have solved the fingerprint-group problem by building a `Table_T` in which each key is a fingerprint and the corresponding value is a `List_T` of names with that fingerprint. Your problem is to compute how many names are in the table? The only functions you may use from the `List` and `Table` interfaces are

```c
extern int List_length(List_T list);
extern void Table_map (Table_T table, void apply(const void * key, void ** value, void * cl),
                        void * cl);
```

Using these tools, write a definition of the following function:

```c
int namecount(Table_T t);
```

You may write as many auxiliary function and data definitions as you like, provided they don’t use any other functions from the `List` or `Table` interfaces. You shouldn’t need more than 15–20 lines of C.

Please return your work to the course staff.