StrSubst functions

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1 Introduction

At the different programming contracts I work, I often need a function to replace a substring with another string. Instead of writing one each time, I've written it once. Instead of putting it in some library & forgetting about it, I put it here.

2 License

The source code for each of these functions is copyrighted by Gene Michael Stover & is licensed according to the terms of the Gnu Lesser General Public License (LGPL).

3 C

This version for C assumes you reserve memory from the dynamic memory pool with function called `xmalloc` & return the memory to that pool with `xfree`.

`xmalloc` works like `malloc`; `xfree` works like `free`. If you don't have your own implementations of `xmalloc` & `xfree`, you might do this:

```
/* Easy way to implement xmalloc & xfree as malloc & free */
#define xmalloc malloc
#define xfree free
```

Here is the C source code for `StrSubst` itself.

```
/*
 * Copyright (c) 2004 Gene Michael Stover.  All rights reserved.
 */
/*
 * Given a string, a source substring, & a destination substring, return
 * a new string in which the first occurrence of the source substring
 * has been replaced with the destination substring. If there is no
 * occurrence of the source substring, you get a copy of the original
 * string with no changes. To replace multiple occurrences, call this
 * function multiple times, each time with the last string returned by
 * the previous function call.
 *
 * Caller must free the new string with 'xfree'.
 */
char *
StrSubst (big, src, dst)
     char big[];
     char src[]
     char dst[];
{
  char *str = NULL, *p;

  p = strstr (big, src);
  if (p != NULL) {
    str = (char *) xmalloc (strlen (big) - strlen (src) + strlen (dst) + 1);
    sprintf (str, ``%*s%s%s'', p - big, big, dst, p + strlen (src));
  } else {
    /*
     * Didn't find the src string at all, so return a copy of the big
     * string.
     */
    str = xstrdup (big);
  }
  return str;
}
```

4 Lisp

Guess what: I haven't done the Lisp implementation yet.

A Other File Formats

- This document is available in multi-file HTML format at http://lisp-p.org/strsubst/.
- This document is available in Pointless Document Format at http://lisp-p.org/strsubst/strsubst.pdf.