`file_name` points to a string containing a file name. The function should store the extension on the file name in the string pointed to by `extension`. For example, if the file name is `"memo.txt"`, the function will store `"txt"` in the string pointed to by `extension`. If the file name doesn't have an extension, the function should store an empty string (a single null character) in the string pointed to by `extension`. Keep the function as simple as possible by having it use the `strlen` and `strcpy` functions.

13. Write the following function:

```
void build_index_url(const char *domain, char *index_url);
```

`domain` points to a string containing an Internet domain, such as `"knking.com"`. The function should add `"http://www."` to the beginning of this string and `"/index.html"` to the end of the string, storing the result in the string pointed to by `index_url`. (In this example, the result will be `"http://www.knking.com/index.html"`.) You may assume that `index_url` points to a variable that is long enought to hold the resulting string. Keep the function as simple as possible by having it use the `strcat` and `strcpy` functions.

Section 13.6

*14. What does the following program print?

```
#include <stdio.h>

int main(void)
{
  char s[] = "Hsjodi", *p;

  for (p = s; *p; p++)
    --*p;
  puts(s);
  return 0;
}
```

W *15. Let `f` be the following function:

```
int f(char *s, char *t)
{
  char *p1, *p2;

  for (p1 = s; *p1; p1++) {
    for (p2 = t; *p2; p2++)
      if (*p1 == *p2) break;
    if (*p2 == '\0') break;
  }
  return p1 - s;
}
```

(a) What is the value of `f("abcd", "babc")`?
(b) What is the value of `f("abcd", "bcd")`?
(c) In general, what value does `f` return when passed two strings `s` and `t`?

W 16. Use the techniques of Section 13.6 to condense the `count_spaces` function of Section 13.4. In particular, replace the `for` statement by a `while` loop.

17. Write the following function:

```
bool test_extension(const char *file_name,
                    const char *extension);
```