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/*
 * This is a free program sample that may be reproduced in any form.
 * The author's information should be retained to preserve its identity.
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 *
 * Computer Systems (2301274) class supplement.
 * Description: This is a quick and dirty example created to illustrate
 *             how 'fgets' and 'strtok_r' make a perfect combination to
 *             parse a line of input string into individual tokens for
 *             subsequent processing.
 * History of Modification;
 * Nov 17, 2003
 *             change 'strtok_r' to 'strtok', rendering the code to be
 *             run on both DOS-based and UNIX platforms.
 */

#include <stdio.h>
#include <string.h>

#define EQ(a, b) (strcmp(a, b) == 0)
#define Bsize BUFSIZ /* can be changed */
#define Small (Bsize/2) /* can also be changed */
#define Sep " \t\n()" /* to make '()' separators */
#define BYE "bye"
#define CHAO 99
#define Item 8
#define Normal 0

int parse_token(char *);

int
main(void)
{
    char tmp[Bsize];

    printf("\nenter text (type \"%s\" to quit) ->", BYE);
    while (fgets(tmp, Bsize, stdin) != NULL)
    {
        if (parse_token(tmp) == CHAO)
            break;
        printf("\nenter text (type \"%s\" to quit) ->", BYE);
    }
    printf("\n");
    return Normal;
}

```

```
/*
 * The code is fairly straightforward, so no explanation is necessary.
 */
int
parse_token(char *tmp)
{
    int    rt_code = Normal;
    int    counter = 0;
    char   out_tok[Small];
    char   *p;

    p = strtok(tmp, Sep);
    while (p != NULL)
    {
        strcpy(out_tok, p);
        counter++;
        if (EQ(out_tok, BYE))
        {
            rt_code = CHAO;
            break;
        }
        printf("<%s> ", out_tok);
        if ((counter + 1) % Item == 0)
            printf("\n");
        p = strtok(NULL, Sep);
    }
    printf("\n");
    return rt_code;
}
```