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/*****
/*          "A C-program of the linked list data structure"          */
/*
/*          List2.c
/*
/*          (Feb 03, 2008)
/*
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/*
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/*
*****/
#include <stdio.h>

typedef struct cell {
    int element;
    struct cell *next;
} cell;

cell *head;

/*****
/*          関数名: delete(p)
/*          動作: 位置 p の次の要素を削除
*****/
void delete(cell *p) {
    cell *temp;
    if (head == NULL) {
        printf("Error: List is empty.\n");
        exit(1);
    }
    if (p == NULL) {
        temp = head;
        head = head->next;
        free(temp);
    } else if (p->next != NULL) {
        temp = p->next;
        p->next = p->next->next;
        free(temp);
    }
}

/*****
/*          関数名: insert(x,p)
/*          動作: 位置 p の次に要素 x を挿入
*****/
void insert(int x, cell *p) {
    cell *temp;
    temp = (cell *)malloc(sizeof(cell));
    temp->element = x;
    if (p != NULL) {
        temp->next = p->next;
        p->next = temp;
    } else {
        temp->next = head;
        head = temp;
    }
}

/*****
/*          関数名: writelist
/*          動作: リストの中身を画面に出力する。
*****/
void writelist(void) {
```

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cell *temp=head;
printf("List: [");
while (temp != NULL) {
    printf("%5ld", temp->element);
    if (temp->next != NULL) putchar(',');
    temp = temp->next;
}
printf("]\n");
}

main() {
    writelist();
    insert(1,head); writelist();
    delete(NULL); writelist();
    insert(6,head); writelist();
    insert(2,head); writelist();
    delete(NULL); writelist();
    insert(5,NULL); writelist();
    insert(10,NULL); writelist();
    delete(NULL); writelist();
    insert(29,NULL); writelist();
    insert(4,NULL); writelist();
    delete(NULL); writelist();
    delete(NULL); writelist();
    delete(NULL); writelist();
    delete(NULL); writelist();
    delete(NULL); writelist();
}
```