```c
#include <stdio.h>
#include <stdlib.h>

typedef struct list_elem
{
    // Here's your code
}l_elem;
typedef struct
{
    // Here's your code
}list1;

void init_list(list1 *list_ptr);
void append(list1 *list_ptr, int value);
void print_list(list1 *list_ptr);
void clear_list(list1 *list_ptr);
int get_by_index(list1 *list_ptr, int index);
void delete_by_index(list1 *list_ptr, int index);
void delete_all_odd(list1 *list_ptr);
void delete_all_even(list1 *list_ptr);

int main()
{
    int i;
    int a,b,c;
    list1 mylist;
    init_list(&mylist);
    printf("append values from 0 to 9\n");
    for(i=0;i<10;i++) append(&mylist,i);
    print_list(&mylist);
    printf("get_by_index():\n");
    printf("mylist[0]==%d\n", get_by_index(&mylist,0));
    printf("mylist[4]==%d\n", get_by_index(&mylist,4));
    printf("mylist[9]==%d\n", get_by_index(&mylist,9));
    a=get_by_index(&mylist,10);
    a=get_by_index(&mylist,-10);
    a=get_by_index(&mylist,-1);
    b=get_by_index(&mylist,-4);
    c=get_by_index(&mylist,-9);
    printf("mylist[-1]==%d,
            mylist[-4]==%d,
            mylist[-9]==%d\n",
            a,b,c);
```

```c
        printf("delete_by_index():\n");
        delete_by_index(&mylist,0);
        delete_by_index(&mylist,-4);
        delete_by_index(&mylist,9);
        delete_by_index(&mylist,7);
        print_list(&mylist);
        for(i=0;i<10;i++)append(&mylist,i);
        print_list(&mylist);
        delete_all_odd(&mylist);
        print_list(&mylist);
        delete_all_even(&mylist);
        print_list(&mylist);
        for(i=1;i<6;i+=2)append(&mylist,i);
        for(i=0;i<6;i+=2)append(&mylist,i);
        for(i=1;i<6;i+=2)append(&mylist,i);
        for(i=0;i<6;i+=2)append(&mylist,i);
        for(i=1;i<6;i+=2)append(&mylist,i);
        print_list(&mylist);
        delete_all_odd(&mylist);
        print_list(&mylist);
        for(i=0;i<10;i++)append(&mylist,i);
        print_list(&mylist);
        delete_all_odd(&mylist);
        print_list(&mylist);
        delete_all_even(&mylist);
        print_list(&mylist);
        clear_list(&mylist);
        return 0;
}
// Here's the implementation of the functions
//
//
```