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/*
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 * Homework 2
 */

#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <assert.h>
typedef struct list_entry list_entry_t;

struct list_entry {
    void *key;
    void *value;
    list_entry_t *next;
};

typedef struct {
    list_entry_t *list;
    int (*cmp)(const void *, const void *); /* Comparison function */
} list_head_t;

list_head_t *list_init(int (*cmp)(const void *, const void *));

list_entry_t *list_insert(list_head_t *head, void *key, void *value);

void *list_search(list_head_t *head, void *key);

void list_delete(list_head_t *head);

int cmp_double(double *a, double *b);

int cmp_string(const void *a, const void *b);
```