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// Section: 001
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#ifndef DISK_QUEUE_H
#define DISK_QUEUE_H

// Library Declaration Section
#include "structures.h"

// Typedef that defines structure disk_queue_s to have a pointers of same structure
previous and next
typedef struct disk_queue_s *disk_queue_t;

// Function disk_queue_init allocates dynamic memory for a disk_queue_t by calling
function list_init() from
// file list.c and will return the address of the allocated memory
disk_queue_t disk_queue_init(void);

// Function disk_queue_insert will call function list_append to insert a request at
the end of databse disk_queue
int disk_queue_insert(disk_queue_t eq, request_t req);

// Function disk_queue_peek will call function list_first to obtain the address of t
he first item on database disk_queue
// and if true it wil return item, if no item in database disk_queue it will return
a NULL
request_t disk_queue_peek(disk_queue_t dq);

// Function disk_queue_remove will call function list_remove to remove current reques
t on database disk_queue and will return the
// address of current if succesfull, if not it returns a NULL
request_t disk_queue_remove(disk_queue_t dq);

// Function will check if there is a request on the disk_queue database and if true
it will return 0 to signify that, this is true, if not it returns
// -1 to signify false
int disk_queue_empty(disk_queue_t dq);

// Function disk_queue_finalize will call function list_finalize which will free ea
ch dynamic memory called for each single database in disk_queue
void disk_queue_finalize(disk_queue_t dq);

#endif
```