```
#include <stdlib.h>
#include <stddef.h>

#include "memory.h"
#include "exception.h"

static void * (*malloc_fun)(size_t) = malloc;
static void (*free_fun)(void *) = free;

DEFINE_EXCEPTION(memory_default);

void
*memory_alloc(size_t size)
{
    void *p = malloc_fun(size);

    if (p == NULL)
        RAISE(memory_default);
    return p;
}

void
memory_free(void *p)
{
    free_fun(p);
}

void
memory_set_functions(void *(*malloc_user_fun)(size_t),
                     void (*free_user_fun)(void*))
{
    malloc_fun = malloc_user_fun;
    free_fun = free_user_fun;
}
```