```c
// Name: Rodrigo Ignacio Rojas Garcia
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// Section: 001
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// Assignment Number: 1

// Defines the maximum number of characters in character array
#define MAXCHARACTERS 80
// Defines the maximum number of inventories that can be created
#define MAXINVENTORIES 8
// Defines the maximum number of items that can be stored in an inventory
#define MAXITEMS 8
// Defines the maximum number of characters that can be in the description of an it
em
#define MAXDESCRIPTION 16

// Defines the structure of an inventory
struct inventory
{
    int allocated_slots[MAXITEMS]; // Integer array that will be used to check whic
h slots have been allocaed with memory
    int first_item; // Used in inventory_first to see which item was first alloced
 in array and stores location in it
    struct inventory_item *items[MAXITEMS]; // Array of structures that point to di
fferent items
};

// Defines the structure of an invetory item
struct inventory_item
{
    int item_key; // Used as a unique locator for an item
    int item_type; // 0.- Armor, 1.- Sword, 2.- Shield, 3.- Scroll, 4.- Potion // S
tores a number which references the type of item entered
    char description[MAXDESCRIPTION]; // Stores a 15 character description of item
entered
    float power; // Stores power of item entered
    int modifier; // Stores how the item modifes the player
};

// Defines needed functions of an iventory management with following API:
struct inventory *inventory_create();
int inventory_add(struct inventory*, struct inventory_item*);
struct inventory_item *inventory_lookup(struct inventory *, int);
int inventory_delete(struct inventory *, int);
struct inventory_item *inventory_first(struct inventory *);
struct inventory_item *inventory_next(struct inventory*);
int inventory_destroy(struct inventory*);
```