```
1 /*
2 * C program by Dave Russillo. Made for CS1311.
* Takes collection of items and puts it in linked list.
4 */
5 #include <stdio.h>
6#include <stdlib.h>
7#include <string.h>
9 struct videogame {
10 char name[31];
double space; // in GB
int playtime; // in hours
double price; // in USD
struct videogame *next;
15 };
16 struct videogame *head, *last, *current;
17 int entries; // length of list
18
19
20 void add_node(void) {
   int valid_value = 0; // boolean
21
22
   // new struct
   current = malloc(sizeof(struct videogame));
24
25
   // set name
   printf("Enter name (will read up to 30 characters): ");
27
   fgets(current->name, 31, stdin);
28
29
   // remove newline
   if(strcspn(current->name, "\n") == 30) { // if strcspn returns length, input exceeds limit
30
   while(getchar() != '\n');
31
```

```
} else {
     current->name[strcspn(current->name, "\n")] = '\0';
   // set space
   while(valid value == 0) {
37
     printf("Enter required space in GB (up to 9,999.9): ");
     scanf("%lf", &current->space);
     if(current->space < 0.000001 || current->space > 9999.9) {
       printf("Invalid value for required space was entered. Try again. \n");
41
     } else {
42
       valid value = 1; // pass
   valid value = 0; // reset valid value
   // set playtime
48
   while(valid value == 0) {
     printf("Enter playtime in hours (up to 99,999): ");
     scanf("%d", &current->playtime);
51
     if(current->playtime < 0 || current->playtime > 99999) {
52
       printf("Invalid value for playtime was entered. Try again. \n");
53
     } else {
       valid value = 1; // pass
   valid_value = 0; // reset valid_value
   // set price
   while(valid value == 0) {
61
     printf("Enter price in USD (enter up to 999.99): ");
62
```

32

33 34 35

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60

```
scanf("%lf", &current->price);
    if(current->price < 0 || current->price > 999.99) {
64
      printf("Invalid value for price was entered. Try again. \n");
65
66
    } else {
      valid_value = 1; // pass
67
68
69
   valid_value = 0; // reset valid_value
70
71
  while(getchar() != '\n'); // clear input buffer
72
73
   // set next
74
   current->next = NULL;
75
76
   if(head == NULL) {
77
    head = current;
78
   } else {
79
    last->next = current;
80
81
   last = current;
82
   entries++; // track entries
83
84 }
85
86
87 void print nodes(void) {
   char price buffer[8];
88
89
   90
  91
92
   printf("|
93
```

```
printf(" | name
                                                                   \n");
                                       req. space | playtime
                                                            price
   printf("|
96
   if(head == NULL) {
     printf("|
97
     printf(" NULL
                                                                    | \n");
                                              NULL
                                                       NULL
                                                               NULL
     printf("
                                                                    [\n");
100
   } else {
101
     current = head;
102
     while(current != NULL) {
      sprintf(price_buffer, "$%.2f", current->price);
103
                                                                     | \n");
104
      printf(
      printf("| %-30s | %8.1fGB | %6dh | %7s |
                                          \n", current->name, current->space, current->playtime, price_buffer);
105
      printf("
106
                                                                 ____| \n");
107
      current = current->next;
108
109
   printf("\n\n");
110
111 }
112
113
114 int main(void) {
115
   char selection[5] = ""; // add or delete
116
117
   118
119
         "Press enter to continue \n");
120
121
   getchar();
122
   while(strcmp(selection, "done") != 0 && strcmp(selection, "Done") != 0 && strcmp(selection, "DONE") != 0) {
123
124
     print_nodes();
125
       add_node();
126
       print_nodes();
       printf("Would you like to continue? \nType y for yes or done to quit. \n\n?..");
127
       fgets(selection, 5, stdin);
128
129
130
131
     return 0;
132 }
```

This program take videogames' names, required space, playtime, and price as input. It then puts them in a liked list database.

Press enter to continue

CURRENT DATA (1 ENTRIES):

name	req. space	 playtime 	 price
	88.9GB		
Doom Eternal		15h	\$39.99

Enter name (will read up to 30 characters): Minecraft

Enter required space in GB (up to 9,999.9): 0.6

Enter playtime in hours (up to 99,999): 200

Enter price in USD (enter up to 999.99): 23.99

CURRENT DATA (5 ENTRIES):

name	req. space	playtime	price
Doom Eternal	88.9GB	15h	\$39.99
 Minecraft 	 0.6GB 	 200h 	\$23.99
Grand Theft Auto V	110.0GB	1126h	\$10.99
			\$6.89
Rainbow Six Siege	82.3GB	1312h	
 Garfield Kart 	1.8GB	 12h 	\$14.99

Would you like to continue? Type y for yes or done to quit.

?..done