

```
1  #include <cs50.h>
2  #include <stdio.h>
3  #include <stdlib.h>
4  #include <string.h>
5
6  typedef struct node
7  {
8      string phrase;
9      struct node *next;
10 } node;
11
12 #define LIST_SIZE 2
13
14 bool unload(node *list);
15 void visualizer(node *list);
16
17 int main(void)
18 {
19     node *list = NULL;
20
21     // Add items to list
22     for (int i = 0; i < LIST_SIZE; i++)
23     {
24         string phrase = get_string("Enter a new phrase: ");
25
26         // TODO: add phrase to new node in list
27
28         // Visualize list after adding a node.
29         visualizer(list);
30     }
31
32     // Free all memory used
33     if (!unload(list))
34     {
35         printf("Error freeing the list.\n");
36         return 1;
37     }
38
39     printf("Freed the list.\n");
40     return 0;
41 }
42
```

```
43 bool unload(node *list)
44 {
45     // TODO: Free all allocated nodes
46     return false;
47 }
48
49 void visualizer(node *list)
50 {
51     printf("\n+-- List Visualizer ---+\n\n");
52     while (list != NULL)
53     {
54         printf("Location %p\nPhrase: \"%s\"\nNext: %p\n\n", list, list->phrase, list->next);
55         list = list->next;
56     }
57     printf("+-----+\n\n");
58 }
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4  #include <string.h>
5
6  typedef struct node
7  {
8      string phrase;
9      struct node *next;
10 } node;
11
12 node *table[26];
13
14 int hash(string phrase);
15 bool unload(node *list);
16 void visualizer(node *list);
17
18 int main(void)
19 {
20     // Add items
21     for (int i = 0; i < 3; i++)
22     {
23         string phrase = get_string("Enter a new phrase: ");
24
25         // Find phrase bucket
26         int bucket = hash(phrase);
27         printf("%s hashes to %i\n", phrase, bucket);
28     }
29 }
30
31 // TODO: return the correct bucket for a given phrase
32 int hash(string phrase)
33 {
34     return 0;
35 }
```