```c
// Implements linear search for numbers

#include <cs50.h>
#include <stdio.h>

int main(void)
{
    // An array of numbers
    int numbers[] = {4, 6, 8, 2, 7, 5, 0};

    // Search for 0
    for (int i = 0; i < 7; i++)
    {
        if (numbers[i] == 0)
        {
            printf("Found\n");
            return 0;
        }
    }
    printf("Not found\n");
    return 1;
}
```

```c
// Implements linear search for names

#include <cs50.h>
#include <stdio.h>
#include <string.h>

int main(void)
{
    // An array of names
    string names[] = {"Bill", "Charlie", "Fred", "George", "Ginny", "Percy", "Ron"};

    // Search for Ron
    for (int i = 0; i < 7; i++)
    {
        if (strcmp(names[i], "Ron") == 0)
        {
            printf("Found\n");
            return 0;
        }
    }
    printf("Not found\n");
    return 1;
}
```

```c
1  // Implements a phone book without structs
2
3  #include <cs50.h>
4  #include <stdio.h>
5  #include <string.h>
6
7  int main(void)
8  {
9      string names[] = {"Brian", "David"};
10     string numbers[] = {"+1-617-495-1000", "+1-949-468-2750"};
11
12     for (int i = 0; i < 2; i++)
13     {
14         if (strcmp(names[i], "David") == 0)
15         {
16             printf("Found %s\n", numbers[i]);
17             return 0;
18         }
19     }
20     printf("Not found\n");
21     return 1;
22 }
```

```c
// Implements a phone book with structs

#include <cs50.h>
#include <stdio.h>
#include <string.h>

typedef struct
{
    string name;
    string number;
}
person;

int main(void)
{
    person people[2];

    people[0].name = "Brian";
    people[0].number = "+1-617-495-1000";

    people[1].name = "David";
    people[1].number = "+1-949-468-2750";

    // Search for David
    for (int i = 0; i < 2; i++)
    {
        if (strcmp(people[i].name, "David") == 0)
        {
            printf("Found %s\n", people[i].number);
            return 0;
        }
    }
    printf("Not found\n");
    return 1;
}
```

```c
1  // Draws a pyramid using iteration
2
3  #include <cs50.h>
4  #include <stdio.h>
5
6  void draw(int h);
7
8  int main(void)
9  {
10     // Get height of pyramid
11     int height = get_int("Height: ");
12
13     // Draw pyramid
14     draw(height);
15 }
16
17 void draw(int h)
18 {
19     // Draw pyramid of height h
20     for (int i = 1; i <= h; i++)
21     {
22         for (int j = 1; j <= i; j++)
23         {
24             printf("#");
25         }
26         printf("\n");
27     }
28 }
```

```c
// Draws a pyramid using recursion

#include <cs50.h>
#include <stdio.h>

void draw(int h);

int main(void)
{
    // Get height of pyramid
    int height = get_int("Height: ");

    // Draw pyramid
    draw(height);
}

void draw(int h)
{
    // If nothing to draw
    if (h == 0)
    {
        return;
    }

    // Draw pyramid of height h - 1
    draw(h - 1);

    // Draw one more row of width h
    for (int i = 0; i < h; i++)
    {
        printf("#");
    }
    printf("\n");
}
```