

```
1. /**
2.  * ages.c
3.  *
4.  * David J. Malan
5.  * malan@harvard.edu
6.  *
7.  * Ages people by a year.
8.  *
9.  * Demonstrates arrays.
10. */
11.
12. #include <cs50.h>
13. #include <stdio.h>
14.
15. int main(void)
16. {
17.     // determine number of people
18.     int n;
19.     do
20.     {
21.         printf("Number of people in room: ");
22.         n = GetInt();
23.     }
24.     while (n < 1);
25.
26.     // declare array in which to store everyone's age
27.     int ages[n];
28.
29.     // get everyone's age
30.     for (int i = 0; i < n; i++)
31.     {
32.         printf("Age of person #%i: ", i + 1);
33.         ages[i] = GetInt();
34.     }
35.
36.     // report everyone's age a year hence
37.     printf("Time passes...\n");
38.     for (int i = 0; i < n; i++)
39.     {
40.         printf("A year from now, person #%i will be %i years old.\n", i + 1, ages[i] + 1);
41.     }
42. }
```

```
1. /**
2.  * argv-0.c
3.  *
4.  * David J. Malan
5.  * malan@harvard.edu
6.  *
7.  * Prints program's first command-line argument; assumes it's present.
8.  *
9.  * Demonstrates use of argv.
10. */
11.
12. #include <cs50.h>
13. #include <stdio.h>
14.
15. int main(int argc, string argv[])
16. {
17.     printf("%s\n", argv[1]);
18. }
```

```
1. /**
2.  * argv-1.c
3.  *
4.  * David J. Malan
5.  * malan@harvard.edu
6.  *
7.  * Prints command-line arguments, one per line.
8.  *
9.  * Demonstrates use of argv.
10. */
11.
12. #include <cs50.h>
13. #include <stdio.h>
14.
15. int main(int argc, string argv[])
16. {
17.     // print arguments
18.     for (int i = 0; i < argc; i++)
19.     {
20.         printf("%s\n", argv[i]);
21.     }
22. }
```

```
1. /**
2.  * argv-2.c
3.  *
4.  * David J. Malan
5.  * malan@harvard.edu
6.  *
7.  * Prints command-line arguments, one character per line.
8.  *
9.  * Demonstrates argv as a two-dimensional array.
10. */
11.
12. #include <cs50.h>
13. #include <stdio.h>
14. #include <string.h>
15.
16. int main(int argc, string argv[])
17. {
18.     // print arguments
19.     for (int i = 0; i < argc; i++)
20.     {
21.         for (int j = 0, n = strlen(argv[i]); j < n; j++)
22.         {
23.             printf("%c\n", argv[i][j]);
24.         }
25.         printf("\n");
26.     }
27. }
```

```
1. /**
2.  * hello-3.c
3.  *
4.  * David J. Malan
5.  * malan@harvard.edu
6.  *
7.  * Says hello to argv[1].
8.  *
9.  * Demonstrates a command-line argument.
10. */
11.
12. #include <cs50.h>
13. #include <stdio.h>
14.
15. int main(int argc, string argv[])
16. {
17.     printf("hello, %s\n", argv[1]);
18. }
```

```
1. /**
2.  * hello-4.c
3.  *
4.  * David J. Malan
5.  * malan@harvard.edu
6.  *
7.  * Says hello to argv[1].
8.  *
9.  * Demonstrates argc.
10. */
11.
12. #include <cs50.h>
13. #include <stdio.h>
14.
15. int main(int argc, string argv[])
16. {
17.     if (argc == 2)
18.     {
19.         printf("hello, %s\n", argv[1]);
20.     }
21.     else
22.     {
23.         printf("hello, you\n");
24.     }
25. }
```