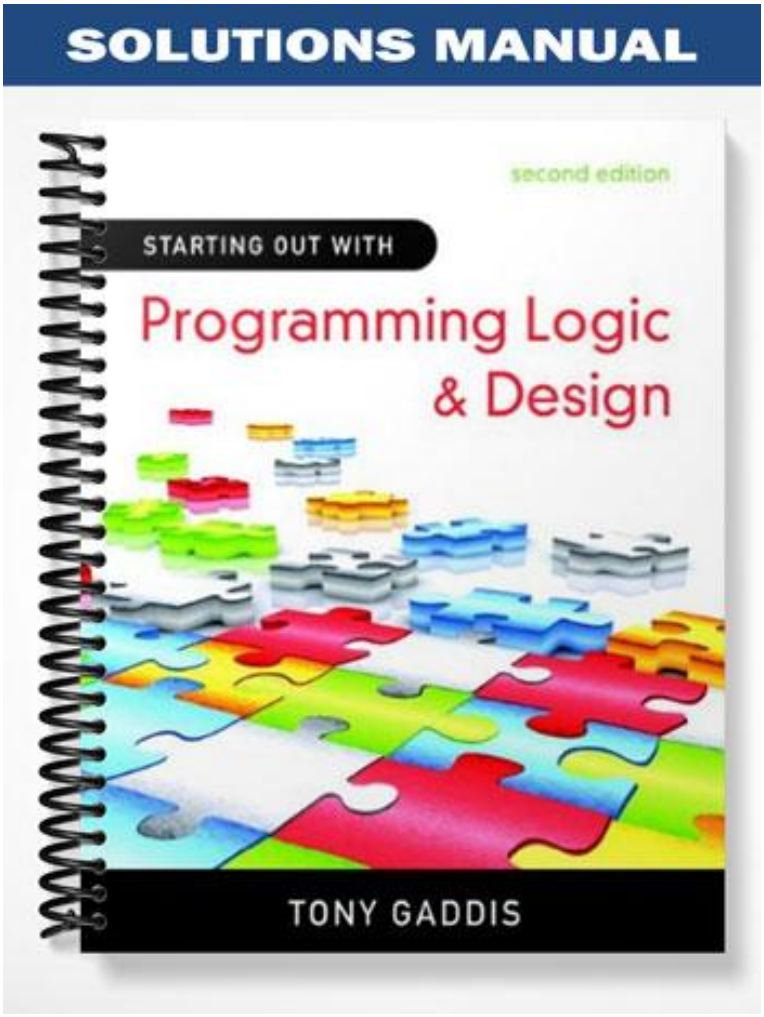
SOLUTIONS MANUAL



Starting Out with Programming Logic and Design, 2nd Edition
Answers to Review Questions

Chapter 1

Multiple Choice

1. b
2. a
3. d
4. b
5. c
6. a
7. c
8. b
9. a
10. a
11. d
12. b
13. c
14. b
15. c
16. a
17. b
18. d
19. b
20. b
21 c
22. a
23. d
24. c
25. b

True or False

1. False
2. True
3. True
4. False
5. True
6. False
7. True
8. False
9. False
10. False

Short Answer

1. Because without it, the computer could not run software.
2. A bit that is turned on represents 1, and a bit that is turned off represents 0.
3. A digital device
4. Keywords
5. mnemonics
6. A compiler is a program that translates a high-level language program into a separate machine language program. The machine language program can then be executed any time it is needed. An interpreter is a program that both translates and executes the instructions in a high-level language program. As the interpreter reads each individual instruction in the program, it converts it to a machine language instruction and then immediately executes it. Because interpreters combine translation and execution, they typically do not create separate machine language programs.
7. Operating system

Exercises

1.

Decimal	Binary
11	1011
65	1000001
100	1100100
255	11111111

2.

Binary	Decimal
1101	13
1000	8
101011	43

3. Here is an example: The ASCII codes for the name Marty are:

```
M =  77
a =  97
r = 114
t = 226
y = 121
```

Chapter 2

Multiple Choice

1. c
2. b
3. d
4. b
5. a
6. c
7. c
8. a
9. b
10. d
11. b
12. a
13. c
14. a
15. d
16. b
17. b
18. c
19. d
20. a

True or False

1. False
2. True
3. False
4. True
5. False
6. True
7. True
8. True
9. False
10. False

Short Answer

1 Interview the customer
2. An informal language that has no syntax rules, and is not meant to be compiled or executed. Instead, programmers use pseudocode to create models, or "mock-ups" of programs.
3. (1) Input is received. (2) Some process is performed on the input. (3) Output is produced.

4. The term user-friendly is commonly used in the software business to describe programs that are easy to use.
5. The variable's name and data type.
6. It depends on the language being used. Each language has its own way of handling uninitialized variables. Some languages assign a default value such as 0 to uninitialized variables. In many languages, however, uninitialized variables hold unpredictable values. This is because those languages set aside a place in memory for the variable, but do not alter the contents of that place in memory. As a result, an uninitialized variable holds the value that happens to be stored in its memory location. Programmers typically refer to unpredictable values such this as "garbage."

Algorithm Workbench

1.
```
Display "Enter your height."
Input height
```

2.
```
Display "Enter your favorite color."
Input color
```

3.
a)
```
Set b = a + 2
```
b)
```
Set a = b * 4
```
c)
```
Set b = a / 3.14
```
d)
```
Set a = b - 8
```

4. a) 12
b) 4
c) 2
d) 6

5.
```
Declare Real cost
```
6.
```
Declare Integer total = 0
```
7.
```
Set count = 27
```
8.
```
Set total = 10 + 14
```
9.
```
Set due = downPayment - total
```
10.
```
Set totalFee = subtotal * 0.15
```
11. 11
12. 5