Chapter 1

Multiple Choice (14) WARNING: CORRECT ANSWERS ARE IN THE SAME POSITION AND TAGGED WITH \*\*. YOU SHOULD RANDOMIZE THE LOCATION OF THE CORRECT ANSWERS IN YOUR EXAM.

1. Which one of the following is not a high-level language?
   1. assembly language \*\*
   2. Java
   3. Visual Basic
   4. Python
2. A sequence of instructions is called a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .
   1. program \*\*
   2. high-level language
   3. interpreter
   4. flowchart
3. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is any person who runs a program.
   1. user \*\*
   2. programmer
   3. coder
   4. computer
4. Computer programs are referred to as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .
   1. software \*\*
   2. hardware
   3. flowcharts
   4. high-level languages
5. The mechanical and electrical devices of a computer are referred to as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   1. hardware \*\*
   2. software
   3. peripherals
   4. programs
6. Writing Python statements is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   1. coding \*\*
   2. compiling
   3. interpreting
   4. processing
7. An error is a program is called a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   1. bug \*\*
   2. moth
   3. incomplete input
   4. cycle
8. Which programming tool is used to show how the different parts of a program relate to each other?
   1. hierarchy chart \*\*
   2. flowchart
   3. pseudocode
   4. algorithm
9. Which programming tool graphically depicts the logical steps to carry out a task and show how the steps relate to each other?
   1. flowchart \*\*
   2. hierarchy chart
   3. algorithm
   4. pseudocode
10. Which programming tool uses English-like phrases with some Python terms to outline the task?
    1. pseudocode \*\*
    2. algorithm
    3. hierarchy chart
    4. flowchart
11. Hierarchy charts are also called
    1. structure charts
    2. top-down charts
    3. Visual Table of Contents charts
    4. all of the above \*\*
12. In a flowchart, the representation of instructions that require a “yes” or “no” answer is called a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
    1. decision structure \*\*
    2. sequence structure
    3. binary structure
    4. answer structure
13. Using different inputs and outputs on a flowchart to test an algorithm is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
    1. desk checking \*\*
    2. interpreting
    3. flow charting
    4. debugging
14. Instructions in a Python program are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
    1. source code \*\*
    2. editor code
    3. debugging code
    4. files

True/False (10)

1. The word *disk* is often used to refer to any storage device.

Answer: true

1. In the program development cycle, the first step in writing instructions to carry out a task is to determine how to process the input to obtain the desired output.

Answer: false

1. Pseudocode is typically more compact than a flowchart.

Answer: true

1. In a hierarchy chart, details on how modules work should be included.

Answer: false

1. The main benefit of hierarchy charts is in the initial planning phase of a program.

Answer: true

1. Flowcharts are time-consuming to write and difficult to update.

Answer: true

1. Python requires all programs be saved as a file on a storage device before they can be executed.

Answer: true

1. Indentation is not semantically meaningful in Python.

Answer: false

1. Python is considered a block-structured language.

Answer: true

1. Planning a solution to a problem is called coding.

Answer: false

Short Answer (9)

1. Most programs do three general things. List them.

Answer: Take in data, manipulate data, and produce desired results. This is also called input, processing and output.

1. Someone preparing for a marathon trains by running laps on a track which is ¼ mile per lap. The runner would like to know their average time in minutes per mile. List the inputs, processing steps and output for a computer program to accomplish this.

Answer: The input is the number of laps and the total time run in minutes. The processing is dividing the laps by 4 to give the miles run, then dividing the time in minutes by the miles. The output is the minutes per mile calculated.

1. Fill in the steps of the problem solving process.  
     
   

Answer:

Input

Processing

Output

1. List the 5 steps in the software development life cycle in order.

Answer:

1) analyze

2) design

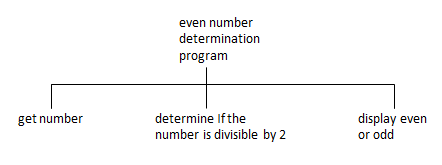
3) code

4) test and correct

5) complete the documentation

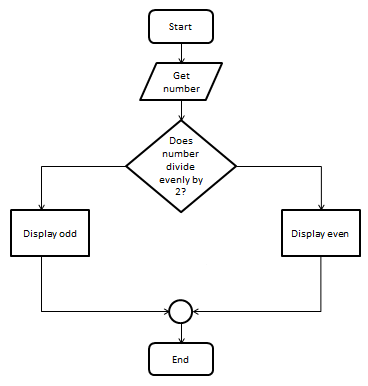
1. You are given the following pseudocode to determine if a number is even or odd. Create a hierarchy chart for this program.  
     
   get number  
   If the number is divisible by 2 without a remainder  
    display the number is even  
   else  
    display the number is odd

Answer:

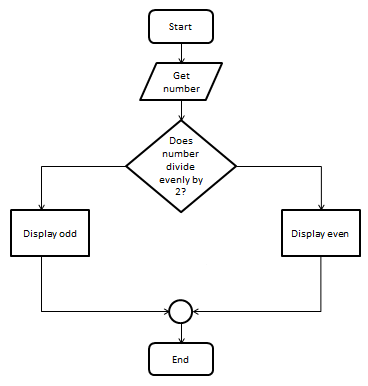


1. You are given the following pseudocode to determine if a number is even or odd. Create a flowchart for this program.  
     
   get number  
   If the number is divisible by 2 without a remainder  
    display the number is even  
   else  
    display the number is odd

Answer:



1. Given the following flowchart for a program that determines if a number is even or odd, write the pseudocode.



Answer:

get number  
If the number is divisible by 2 without a remainder  
 display the number is even  
else  
 display the number is odd

1. Write a line of Python code that displays the sum of 468 + 751.

Answer: print (468 + 751)

1. Write a line of Python code that displays the words “How are you?” to the screen.

Answer: print (“How are you?”)