

HW #2 -- Robbie Selwyn

1. The best way to write a program is to immediately type in some code and debug it until it works.
 - a. False, the best way to write code is to have a plan about how you will go about solving a problem. This sometimes includes writing pseudocode.
2. An algorithm can be written without using a programming language.
 - a. True, algorithms can be written in pseudocode.
3. Programs no longer require modification after they are written and debugged.
 - a. False, as time goes on, user needs can change, meaning the program should change. There also may be undiscovered bugs that are found down-the-line that need editing.
4. Python identifiers must start with a letter or underscore.
 - a. True, identifiers must start with a letter or underscore. Identifiers are case-sensitive.
5. Keywords make good variable names.
 - a. False, keywords are bad names for variables.
6. Expressions are built from literals, variables, and operators.
 - a. True, expressions can be built from literals, variables, and operators. For example, an expression can be "4+x." That uses a literal (4), an operator (+), and a variable (x).
7. In python, `x = x+1` is a legal statement.
 - a. True, in python, one equal sign is used for assignment. `x = x + 1` is assigning x to be one value larger than its previous value. `x == x + 1` would be invalid because that would be saying `0=1`, which isn't true.
8. Python does not allow the input of multiple variables with a single statement.
 - a. False, if a person separates the variables with commas, multiple variables can be input in a single statement.
9. A counted loop is designated to iterate a specific number of times.
 - a. True, a counted loop iterates either a specific number of times.
10. In a flowchart, diamonds are used to show statements, rectangles are used for decision points.
 - a. False, it is the other way around. Diamonds are for decision points, rectangles are for statements.

Multiple Choice:

1. Which of the following is not a step in the software development process?
 - a. Fee setting is not a step in the software development process.
2. What is the correct formula for converting Celsius to Fahrenheit?
 - a. The formula for converting Celsius to Fahrenheit is " $F = 9/5(C) + 32$."
3. The process of describing exactly what computer program will do to solve a problem is called..
 - a. Specification is describing exactly what a computer program will do to solve a problem.
4. Which of the following is not a legal identifier?

- a. 2spam is not a legal identifier because it begins with the number 2.
- 5. Which of the following are not used in expressions?
 - a. Statements are not used in expressions.
- 6. Fragments of code that produce or calculate new data values are called
 - a. Assignment statements!
- 7. Which of the following is not part of the IPO pattern?
 - a. Program is not part of the IPO pattern.
- 8. The template for <variable> in range(<expr>) describes
 - a. The template describes a counted loop.
- 9. Which of the following is the most accurate model of assignment in Python?
 - a. The most accurate model is the sticky-note model.
- 10. In Python, getting user input is done with a special expression called
 - a. input. Input is used to get data from the user.