

15-110: Principles of Computing

School of Computer Science
Carnegie Mellon University in Qatar
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Solution of Recitation 01, September 06, 2018

I) Review Questions:

A) True/False:

1. All information that a computer is currently working on are stored in secondary memory (True/False)
2. The syntax of a language is its meaning and semantic is its form (True/False)
3. Python is a compiled language (True/False)
4. A variable is used to give a name to a value so it can be referred to in other places (True/False)
5. An identifier must start with a letter or underscore (True/False)
6. Keywords make good variable names (True/False)
7. Expressions are built from literals, variables, and operators (True/False)
8. Python treats the variable names, a1 and A1, as the same variable (True/False)
9. In Python, $x /= x + 1$ is a valid statement (True/False)

B) Multiple Choice:

1. Which of the following is NOT an example of a secondary memory?
 - a. RAM
 - b. Hard Drive
 - c. USB Flash Drive
 - d. CD-ROM
2. One difference between a compiler and an interpreter is:
 - a. A compiler is a program
 - b. A compiler is used to translate high-level language into machine language
 - c. A compiler is no longer needed after a program is translated
 - d. A compiler processes source code

3. In Python, getting user input is done with a special function called
 - a. for
 - b. read
 - c. get
 - d. input

II) Programming Exercises:

1. Write a program that prints the following shape:

```
  *
 * *
*  *
*  *
*  *
*  *
*  *
*  *
*  *
*  *
```

Solution:

Find attached the file *stars.py*.

2. Write a program that requests the user to enter two numbers and prints their sum, product, difference, power, and quotient.

Solution:

Find attached the file *mathematical_calc.py*.

3. Write a program that reads in the radius of a circle and prints the circle's diameter, circumference, and area. Use the constant value 3.14159 for π .

Solution:

Find attached the file *circle.py*.