

CSC 242 Practice Quiz
Winter 2024

For multiple choice, circle the best answer.

1. Consider the following expression: `"Hello " + str(name) + "!"`. An equivalent expression is
 - a) `f"Hello {name}!"`
 - b) `format("Hello {name}!")`
 - c) `"Hello {name}!".format(len(name))`
 - d) `insert("Hello %!", name)`
2. Assuming the `MarbleJar` class as presented in class where `mj` is a `MarbleJar` object. Given the following statement: `mj.add_marble("blue")`, an equivalent statement is
 - a) `"blue".add_marble()`
 - b) `Class.add_marble("blue", mj)`
 - c) `add_marble("blue").to.mj`
 - d) `MarbleJar.add_marble(mj, "blue")`
3. One concept for creating a new class that has methods based on a currently defined class is
 - a) extension.
 - b) facilitation.
 - c) inheritance.
 - d) intension.
4. An instance variable for an object
 - a) is shared among all objects that belong to the class, all having the same value.
 - b) is often labeled with surrounding underscores in the Python programming language.
 - c) is automatically unavailable outside of the class in the Python programming language.
 - d) must be explicitly listed in all method parameters.

For the next question, provide the output that each of the Python scripts produces. You can assume that all statements run without any errors.

5. Python script:

```
class Widget:
    "Widget class for practice tracing through method calls"
    def __init__(self, color):
        self.label = color
        self.step = 0

    def advance(self):
        self.step += 1

    def show(self):
        display = self.label + " -- " + str(self.step)
        print(display)

    def morph(self, add_color):
        self.label = self.label + "-" + add_color

    def reset(self, signal):
        self.label = signal
        self.step = 0

obj = Widget("blue")
obj2 = Widget("red")
obj.advance()
obj2.morph("teal")
obj.show()
obj2.show()
obj.reset("start")
obj.show()
obj2.show()
```