

ITP 270 – Programming For Cybersecurity
Midterm Programming Practical (Test Run)

Instructions

- Complete the programming tasks as indicated using Python 3.7.
- Answer the questions that accompany each task
- Open book, open notes, open internet (After all, that's the way real programmers work.)
- You may ask questions during the exam, but each one will cost you 5 points

Tasks

Task 1: Create a python script named Midterm.py that contains the following code then compile and run the program:

```
def main():  
    s = "Hello World!"  
    print(s)
```

```
if __name__ == '__main__':  
    main()
```

Task 1 Questions:

What gets printed to the console?

When you execute this script, what's does the variable `__name__` evaluate to?

Explain your previous answer:

Task 2: Print the length of string "Hello World!" to the console.

Task 2 Questions:

How long is the string?

What method did you use to determine the length of the string?

Task 3: Convert the string “Hello World!” to upper case.

Task 3 Questions:

What method did you use to make the conversion?

Has the original string `s` changed in any way?

Explain your answer

Task 4: Define another method named “spacer” that takes a string argument and prints the string to the console with a space between each character. Call the spacer method from inside the main method and pass in the string `s` as an argument.

Task 4 Questions:

What looping structure did you use to step through the string?

Task 5: Create a second python module named `MyClass.py` and enter the following code.

```
class MyClass:

    def read_strings_from_file(self, filename):
        pass

    def write_strings_to_file(self, filename, stringlist):
        pass
```

Task 5 Questions:

What does the keyword “self” mean?

What does the keyword “pass” mean?

What’s the difference between a function and a method?

Task 6: Implement the functionality suggested by each MyClass method. Import the MyClass module into the Midterm module, create an instance of MyClass , then write a list of strings to a file, then read the strings and print them to the console.