

Practice Exam 1 – Solution

Consider the following Python code fragment and answer Question 1 and Question 2 below:

```
num = int(input("Please, enter an integer: "))
if (num < 10):
    print("num is just 1 digit long.")
else:
    if (num < 100):
        print("num is just 2 digit long.")
    else:
        print("num has more than 2 digits.")
```

- | | |
|--|---|
| <p>1. For which input int values will the code fragment above print "num is just 2 digit long."?</p> <p>A. Any int value between -9 and 9
B. Any int value from -10 to -99
C. 0
D. Any int value from 10 to 99
E. None of the above</p> | <p>2. For which input int values will this code fragment produce a semantic error?</p> <p>A. Any int value between -9 to 9
B. Any int value from -10 to -99
C. 0
D. Any int value from 10 to 99
E. None of the above</p> |
|--|---|

3. What does the following code fragment print?

```
print("!.?blah".strip("!.h"))
```

Answer: ?bla

4. What does the following code fragment print?

```
for item in ["0", "1", "2"]:
    print(item)
```

Answer: 0
1
2

5. What does the following code fragment print?

```
pico = "pico"
paco = "paco"
poco = "poco"
if pico+paco in ["pico", "paco", "pocopoco"]:
    print("It's there!")
else:
    print("Not it isn't!")
```

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Answer: Not it isn't!

6. Consider the following code fragment:

```
isHappy = False
response = input("How are you today?").lower()
if response in ["good", "great", "awesome"]:
    isHappy = True
print(isHappy)
```

What would the output be if the user input was **I feel good**?

Answer: False

7. Problem Statement:

Write a **New Years Bot** that counts down from 10 to 1.

Requirements:

- It should use a `for` loop and each number should be on a new line.
- At the end of the countdown, it should output **Happy new year!**

Here is a sample output (or sample run) ->



```
10
9
8
7
6
5
4
3
2
1
Happy new year!
```

Question 7

<https://repl.it/repls/ShimmeringUntriedModem>

8. Problem Statement:

Write a **Star Wars Bot** that decides if you can be on the Dark side, or the Light side.

To be a Dark Lord you need to like capes or the colour red. Otherwise the bot will recommend you to the Light side.

Requirements:

- Your bot should be robust to upper/lowercase answers of yes and no.

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Here are 5 sample runs:

```
❖  
I will decide if you can join the Dark Side.  
Is red your favourite color? yes  
Do you like capes? yes  
Dark side it is!  
❖
```

```
❖  
I will decide if you can join the Dark Side.  
Is red your favourite color? yes  
Do you like capes? no  
Dark side it is!  
❖
```

```
❖  
I will decide if you can join the Dark Side.  
Is red your favourite color? NO  
Do you like capes? YES  
Dark side it is!  
❖
```

```
❖  
I will decide if you can join the Dark Side.  
Is red your favourite color? no  
Do you like capes? no  
Light side, I see.  
❖
```

```
❖  
I will decide if you can join the Dark Side.  
Is red your favourite color? asdf  
Do you like capes? asdf  
Light side, I see.  
❖
```

Question 8

<https://repl.it/repls/AbleSubtleCustomer>