

Python Worksheet Problems 2

You can use either python locally if you have it installed or you can use this online browser to do these problems.

<https://www.online-python.com/>

1. Print the first 10 natural numbers using a while loop. Then do the same using a for loop.

Expected output:

```
1
2
3
4
5
6
7
8
9
10
```

2. Create a function for the problem stated below.

Given an array of ints, return True if the sequence of numbers 1, 2, 3 appears in the array somewhere.

array123([1, 1, 2, 3, 1]) → True

array123([1, 1, 2, 4, 1]) → False

array123([1, 1, 2, 1, 2, 3]) → True

def array123(nums:int) -> bool:

3. Create a function for the problem stated below.

Given a non-empty string like "Code" return a string like "CCoCodCode".

string_splosion('Code') → 'CCoCodCode'

string_splosion('abc') → 'aababc'

string_splosion('ab') → 'aab'

def string_splosion(str:string) -> string:

4. Write a Python program to print the alphabet pattern A

Pictorial Presentation: Hint: Think of the it as a grid, so you have 5 columns and 7 rows.

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

Your starting code would be
result_str = ""

For ____:

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5. Given a list variable, display any duplicate items from a list. (this means if you have a list of number you put in the function it should give you back only the numbers that were repeated.

example: doubles([1,2,2,3,3,4,5,6,4]) -> [2,3,4]

def doubles(nums:int) -> int:

Hint: use len to know how long your loop should be.