Homework 5:
Due Date: 07/05/2024

Objective:
Enhance your Python programming and problem-solving skills through solving coding exercises. Remember, practice is key to mastery!

Submission:
Submit a single .pdf document on Canvas with all the sections completed.

Section 1: (25 Points) Write a function named **count_primes** that returns the number of prime numbers that exist up to and including a given number. Demonstrate how to call the function and display the output.

Section 2: (25 Points) Convert the following functions into lambda expressions. Test both the original and lambda versions.

`def square(num):` `  return num ** 2`	`def concatenate(str1, str2):` `  return str1 + str2`
`def add(x, y):` `  return x + y`	`def string_length(s):` `  return len(s)`

`def is_even(num):`
`  return num % 2 == 0`
	`def reverse(a):`
	`  a_reversed = a[::-1]`
	`  return a_reversed`

Section 3: (25 Points) Convert these conditional structures to ternary operations and test both versions.

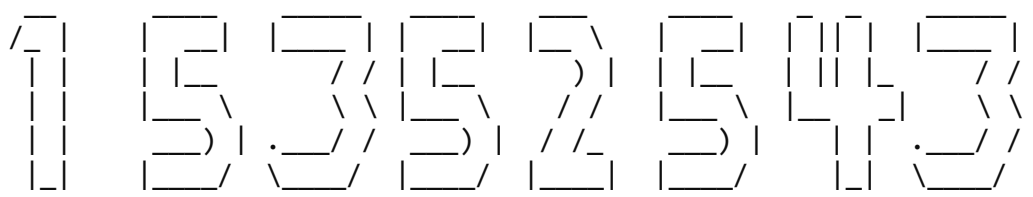
`if num > 0:`
`  return "Positive"`
`elif num == 0:`
`  return "Zero"`
`else:`
`  return "Negative"`
	`if age >= 18:`
	`  return "Adult"`
	`else:`
	`  return "Minor"`

`if lst:`
`  return "Not empty"`
`else:`
`  return "Empty"`
	`if num % 2 == 0:`
	`  return "Even"`
	`else:`
	`  return "Odd"`

Section 4: (25 Points) Provide code and test output for each:
a) Create a function that uses several default values.
b) Create a function that uses positional arguments *args.
c) Create a function that uses keyword arguments **kwargs.
d) Create a function that combines *args, **kwargs, and default values.

Section 5: BONUS (15 Points) Create a function that prints digits or characters as ASCII art, and then use it to write your zNumber or any other message.

Examples are provided.



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            d8888        888           d88P  Y88b   888          d88P  Y88b   888             d8P888     d88P  Y88b
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888    888    88888888     888          888          888  888    ----  888          d88P"         888    888
888    888    Y8b.         888          888          Y88..88P    ----  888          888"          Y88b  d88P
888    888     "Y8888      888          888           "Y88P"     ----8888888      888888888      "Y8888P"
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