**Pace University**

[**Introduction to Coding FALL 2023 74291**](https://classes.pace.edu/d2l/home/386664)

Midterm – 25 points

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Time: 1 hour

**How to answer and submit:** For programming problems (1-4), add screenshots of your code and output and add them under each question. In your code write enough comments and write your name in the first comment. For questions (5-8), type appropriate answers. Once done, upload your word doc in LMS.

1. Write a Python program to convert temperatures to and from Celsius and Fahrenheit.  
   [ Formula : c/5 = f-32/9 [ where c = temperature in Celsius and f = temperature in Fahrenheit ]. – (5 points)   
   *Expected Output* :  
   60°C is 140 in Fahrenheit  
   45°F is 7 in Celsius

**Your solutions:**

A screenshot of a computer program

Description automatically generated

1. Write a Python program that iterates the integers from 1 to 30. For multiples of three print "Buzz" instead of the number and for multiples of five print "Fizz". For numbers that are multiples of three and five, print "BuzzFizz". (5 points)   
   *Sample Output* :  
   1  
   2  
   buzz  
   4  
   fizz

**Your solutions**:

A screenshot of a computer program

Description automatically generated

1. Write a Python function that takes a list of words and return the shortest word and the length of the shortest one. (5 points)   
   Sample Output:  
   Shortest word: Pen  
   Length of the Shortest word: 3

**Your solutions:**

A screen shot of a computer

Description automatically generated

1. Write a Python program to print the odd numbers from a given list. (5 points)

*Sample List*: [1, 2, 3, 4, 5, 6, 7, 8, 9] *Expected Result*: [3, 5, 7, 9]

**Your solutions:**

A screenshot of a computer program

Description automatically generated

1. What’s wrong with this following code – (1 point)

my-var = "John"

**Your solutions:**

Instead my\_var = “john” they used my-var=”john”. That’s the reason for not being able to assign to that variable. Syntax error.

1. In python, how to assign multiline strings to a variable, give example – (1 point)

**Your solutions:**

In python, this is the method used to assign multiline strings to a variable.

Multiline\_strings = ‘’’this is a

Multiline string

In python’’’

Print(multilibe\_strings)

1. In your own language, explain what’s wrong with the following code – (1 point)

thistuple = ("apple", "banana", "cherry")

thistuple.append("orange")

print(thistuple)

**Your solutions:**

The problem with the code is that tuples are immutable in Python, which means that once they are created, their values cannot be modified. As a result, calling the `append()` method on a tuple will result in a `Type Error`.

1. What’s the difference between parameters and arguments? Give example. (2 points)

**Your solutions:**

Parameters are variables declared in a function's definition, while arguments are the actual values passed to the function when it is called.

**Example:**

def add\_numbers(x, y): # x and y are parameters

return x + y

result = add\_numbers(5, 4) # 5 and 4 are arguments

print(result) # Output: 9

In this example, `x` and `y` are parameters of the `add\_numbers` function, while `5` and `4` are arguments passed to the function when it is called. The function returns the sum of the two arguments, which is `9`.