**CSCI 1411: Fundamentals of Computing**

**Lab 5**

**Due Date: March 02, 2022**

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**Goals:**

* Understanding the string datatype
* Becoming familiar with various operations that can be done with string.

**Development Environment:** IDLE

**Deliverables:**

1. This lab handout with 4 screen shots (2 for part I, 2 for part II).
2. Your Python code for Part I of this lab. Name the file using the following format:  
   yourlastnameFirstnameLab05a.py

Example: If your name is Jamal Jones then you will name the file as follows:  
JonesJamalLab05a.py

1. Your Python code for Part II of this lab. Name the file using the following format:  
   yourlastnameFirstnameLab05b.py  
   Example: If your name is Jamal Jones then you will name the file as follows:  
   JonesJamalLab05b.py

How to take a **screen shot**:

* For a Windows 10: Use Snipping Tool to copy and CTRL + V to paste screen shot.
* For Mac: Shift + Command + 4 to copy and CTRL + V to paste screen shot.

**Part I – Skill Practice(10 pts)**

* Start IDLE
* Create a new file.
* Type the following code in the file. …..**Do not cut and paste.** You will learn more by typing it in.
* Remember to update the first 3 lines with your own first name, last name and the date of the lab.

# Your first Name

# Your Last Name

# Date: The date

# Description: Lab 5. This lab shows various operations of String datatype

def main():

firstName = input("Please enter your first name: ")

lastName = input("Please enter your last name: ")

#You can calculate the size/length of the string using len() function

length = len(firstName)

print("length of the first name is:", length)

length\_2 = len(lastName)

print("length of your last name is: ", length\_2)

# "+" operator is used to concatenate 2 strings

fullName = firstName + " " + lastName

print("Your full name is: ", fullName)

# "\*" operator is used as a repetition operator to make multiple copies of a string.

n = int(input("Enter a number: "))

print("Repeating your name", n, "times")

print((firstName + " ") \* n)

#You can iterate through the characters using for loop

print("Printing the full name using for loop")

for ch in fullName:

print(ch, end = "")

#A string is a sequence of character. Each individual character can be

#accessed by using index. In Python index starts from 0.

#Here is an example how we can run a loop to access all characters from a string.

print("\nPrinting the full name using indexing")

for i in range(len(fullName)):

print(fullName[i], end = "")

#Python also allows indexing from right end of a string using negative indexes.

#Negative indexing starts from -1.

#Here is an example how we can use negative indexing to access the characters

#in reverse order.

print("\nPrinting the name in reverse order")

for i in range(-1, -(len(fullName)+1), -1):

print(fullName[i], end = "")

#Slicing operator is used to access a contiguous sequence of characters or substring.

#following is an example of generating username from using the first 3 characters of

#last name combined with the first 3 characters of the first name.

userName = lastName[0:3] + firstName[0:3]

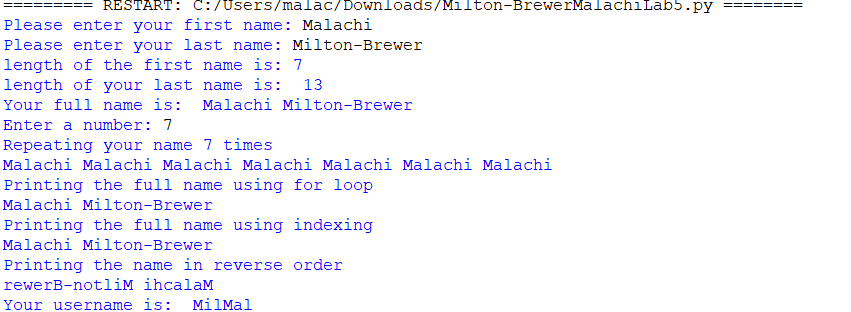
print("\nYour username is: ",userName)

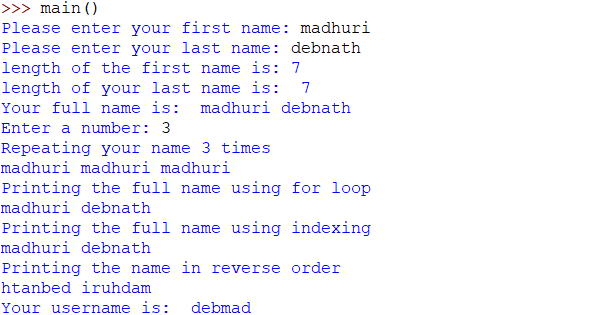
* Save the file as “YourLastNameYourFirstNameLab05a.py”
* Click Run -> Run Module
* If you get any syntax error, try to correct the syntax error.
* If no syntax error, this will redirect you to the output screen.
* Type main()
* Output will look like the following:

A screenshot of a cell phone

Description automatically generated

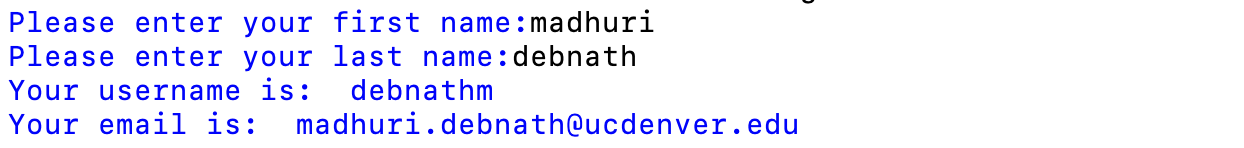
* Please capture 2 screenshots with your output with 2 different inputs and paste them here.
* Please submit your code on Canvas.

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**Part II: Generate username and email address (15 Points)**

* In this part, you will generate username and email address from first name and last name.
* Create a python program and save the file as “lastnameFirstnameLab05b.py”. The program does the following things:
  + Ask user for First Name
  + Ask user for Last Name
  + Generate the username by using the last name concatenated with the first character of first name. For example: if your first name is “Madhuri” and Last name is “Debnath”, then user name will be “debnathm”.
  + Generate the email address in the following format: [firstname.lastname@ucdenver.edu](mailto:firstname.lastname@ucdenver.edu). For example: if your first name is “Madhuri” and Last name is “Debnath”, then user name will be “madhuri.debnath@ucdenver.edu”.
  + All characters in your username and email address will be in lowercase format. Please use lower() function to convert a string into lowercase format. For example: “Madhuri”.lower() will be evaluated to “madhuri”.
* The sample input and output will look like the following:
  + Sample input/output 1

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* + Sample input/output 2:
  + **A picture containing knife, table, bird

    Description automatically generated**
* Please capture 2 screenshots with your output with 2 different inputs and paste them here.
* Please submit your code on Canvas.

