

**Allen E. Paulson College of Engineering& Computing**

**Department of Information Technology**

**Lab 6**

Report for **Lab 6** that is due on Thursday, February 24, 2022

As part of ITW 2431 Data Programming II

**Name: Michael Patak**

**Date of Submission: Thursday, February 24, 2022**

# Section 1 – Lab 6 Prob 1 Purpose(s) of Program Problem, Output of Sample Run, and Learning Experience

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| 1. **Purpose(s) of Problem:**   The program will create a tuple using course and instructor data included in the program and print  out the 'old tuple'. The program will then update one of the course/instructor tuple with a new  course/instructor tuple and print out the 'updated tuple'. |
| 1. **Source Code File Name:** ITW2431\_L6\_P1\_mpatak.py |
| 1. **Other Supporting File(s) (if any):** n/a |
| 1. **Hours Spent on Developing the Solution of the Problem and Writing the Program:** 1 hour |
| 1. **The Output of Program Sample Run:** |
| 1. **Overall Learning Experience for the Problem:**   For this program I did not do what I think is the common approach of creating a list from the tuple, update the list, and create a new tuple from the updated list. I created the old tuple and then created the updated tuple by slicing the first two elements from original tuple, concatenating the new data as tuple elements, and then concatenating the rest of the original tuple. I was able to achieve the desired results with four lines of code. |

# Section 2 – Lab 6 Prob 2 Purpose(s) of Program Problem, Output of Sample Run, and Learning Experience

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| 1. **Purpose(s) of Problem:**   The program will get an integer from the user for the number of exponents of 2 and 3 to calculate.  The program will create a tuple of power of 2 exponents and a tuple holding the power of 2 and  power of 3 exponents. The program will also calculate and additional power of 2 \*\* n+1 and add it to  the power of 2 tuple. The program will output the power of 2 tuple, the power of 2 \*\* n+1 tuple,  and tuple of both power of 2 and power of 3 tuple. |
| 1. **Source Code File Name**: ITW2431\_L6\_P2\_mpatak.py |
| 1. **Other Supporting File(s) (if any):**  n/a |
| 1. **Hours Spent on Developing the Solution of the Problem and Writing the Program:** 1.5 hours |
| 1. **The Output of Program Sample Run:** |
| 1. **Overall Learning Experience for the Problem:**   This problem was good for using lists to create data to use for creating a tuple. |