

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

**Department of Information Technology**

**Lab 11**

Report for **Lab 11** that is due on Thursday, March 31, 2022

As part of ITW 2431 Data Programming II

**Name: Michael Patak**

**Date of Submission: Thursday, March 31, 2022**

# Section 1 – Lab 11 Prob 1 Purpose(s) of Program Problem, Output of Sample Run, and Learning Experience

|  |
| --- |
| 1. **Purpose(s) of Problem:**   Create a class named "PartyAnimal". The class will have two methods, party() and display(). The  program will create a PartyAnimal object and the it will call the party() method to add someone to  the party and display their welcome message. The program will also output a count of the current  number of guests at the party. |
| 1. **Source Code File Name:** ITW2431\_L11\_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:**   I felt the problem instructions lack enough details to have a clear view of the design, so I used initiative for how I felt it should work. |

# Section 2 – Lab 11 Prob 2 Purpose(s) of Program Problem, Output of Sample Run, and Learning Experience

|  |
| --- |
| 1. **Purpose(s) of Problem:**   Create a class named "RemoteControl". The class will have five methods, volume\_up(),  volume\_down(), change\_channel(), tv\_on(), and tv\_off(). The program will create a RemoteControl  object and it will call the various methods to demonstrate that they are all working correctly. When  the TV is turned off and back on the previous volume and channel setttings will be the same. |
| 1. **Source Code File Name**: ITW2431\_L11\_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 hour |
| 1. **The Output of Program Sample Run:** |
| 1. **Overall Learning Experience for the Problem:**   The instructions for this were clear enough for what class and methods to create. There could have been details about what is max or min volume and how many channels are there. |

# Section 1 – Lab 11 Prob 3 Purpose(s) of Program Problem, Output of Sample Run, and Learning Experience

|  |
| --- |
| 1. **Purpose(s) of Problem:**   Create a class named "StringStuff". The class will have three methods, get\_string(), lower\_string(),  and upper\_string(). The program will program will prompt a user for input using the get\_string()  method. The program will then output the original string. The program will call the lower\_string()  method and output the string in all lowercase. The program will then call the upper\_string() method  and output the string in all uppercase. |
| 1. **Source Code File Name:** ITW2431\_L11\_P3\_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:**   This was a very easy to understand and execute assignment. |

# Section 1 – Lab 11 Prob 4 Purpose(s) of Program Problem, Output of Sample Run, and Learning Experience

|  |
| --- |
| 1. **Purpose(s) of Problem:**   Create a class named "Rectangle". The class will have two methods, calc\_perimeter() and  calc\_area(). There will be a subclass of Rectangle named Square. The program will use length and  width to calculate the area of the rectangle. The program will use the length of the side of a square  to calculate the area and perimeter of the square. |
| 1. **Source Code File Name:** ITW2431\_L11\_P4\_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:**   The subclassing of an existing class provided a nice exercise for what I had read about in the text book. |