**Experiment List**

**Name of the subject:**Programming Skill II (Python) **Semester**: IV (AY-2019-20)

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| --- | --- | --- | --- | --- | --- | --- |
| **Sr.No.** | **Name of the experiment** | **Lab objective** | **Lab outcome** | **PO attained** | **PEO achieved** | **Type of Experiment** |
| 01 | Write a python programs to implement Comments, Datatypes, Expressions, Input and Output Functions | LOB 1 | LO 1 | 1,11 | 1 | Problem Solving |
| 02 | Write python programs to understand Byte array, Range, Set and STRINGFunctions | LOB 1,4 | LO 1,4 | 1,3,4,5,10 | 1,3,4,5,6,7 | Group learning |
| 03 | Write python programs to understand List Tuple, Dictionaries and Arrays | LOB 1, 4 | LO 1, 4 | 1,3,11 | 1,5 | Problem Solving |
| 04 | Write python programs to understand the Control Structures  II. A Write python programs to understand Functions | LOB 1, 4 | LO 1, 4 | 1,3 | 1,5 | Problem Solving /Implementation |
| 05 | Write python programs to understand Classes, object, Static method and inner class | LOB 2, 5 | LO 2, 5 | 1,3 | 1,5 | Problem Solving/ Design based |
| 06 | Write python program to understand different types of Exceptions | LOB 2 | LO 2 | 1,3,5 | 1,2,3,5,6 | Problem Solving /Implementation |
| 07 | Write python programs to understand different file handling operations with pickle | LOB 2, 4 | LO 2, 4 | 1,3, 5 | 1,2,3,5,6 | Problem Solving/ Design based |
| 08 | Write python programs to understand Lambda, map, reduce, filter and range functions | LOB 3 | LO 3 | 1,3,5 | 1,2,3,5,6 | Problem Solving /Implementation |
| 09 | Write python programs to understand GUI Canvas Application using Tkinter | LOB 5 | LO 5 | 1,3,5 | 1,2,3,4,5,6 | Problem Solving /Implementation |
| 10 | Write python programs to understand CRUD Operations using Mysql Python Database Connectivity | LOB 5 | LO 5 | 1,3,5 | 1,2,3,5,6 | Problem Solving /Implementation |
| 11 | Mini project in Python | LOB 1,2,3,4,5,6 | LO 1,2,3,4,5,6 | 1,3,4,5,10,11,12 | 1,2,3,4,5,6,7 | Mini Project |

**Subject Incharge**

BhushanNemade

SudhirDhekane

Experiment No 1:

**Problem definitions:**

1. Write a Python program which accepts the radius of a circle from the user and compute the area.
2. Write a Python program which accepts the number from the user and Print it is Prime Number or Not.
3. Write a Python program which accepts the Number from the user and print all Factors of it.
4. Write a Python program which accepts the Number from the user and find its factorial.

Experiment No 2:

**Problem definitions:**

1. Write a Python program to create a bytearray from a list. (Exercise:<https://www.geeksforgeeks.org/python-bytearray-function/>)
2. Write a Python program to count the number of characters (character frequency) in a string.   
   **Sample String :** google.com'  
   Expected Result : 'o': 3, 'g': 2, '.': 1, 'e': 1, 'l': 1, 'm': 1, 'c': 1

Exercise: <https://www.w3resource.com/python-exercises/string/>

1. Write a Python function that takes a list of words and returns the length of the longest one.
2. Write a Python program to create a set and perform following operations on it
3. to iteration over sets **b)** to add member(s) in a set **c)** to remove item(s) from set

**d)**to remove an item from a set if it is present in the set **e)**  to create an intersection of sets

Find More Programs on: <https://www.w3resource.com/python-exercises/sets/>

Experiment No 3:

**Problem definitions:**

1. Write a Python program to get the smallest and largest number from a list.
2. Write a Python program to count the number of strings where the string length is 2 or more and the first and last character are same from a given list of strings(Exercise: <https://www.w3resource.com/python-exercises/list/>)
3. Write a Python program to create a tuple and perform operations on it (Exercise: <https://www.w3resource.com/python-exercises/tuple/>)
4. Write a Python program to create a dictionary and perform operations on it (Exercise: <https://www.w3resource.com/python-exercises/dictionary/>)
5. Write a Python program to create an array and perform operations on it (Exercise: <https://www.w3resource.com/python-exercises/array/>)

Experiment No 4:

**Problem definitions: [Control Structures]**

a) Write a Python program to convert and display decimal to binary equivalent.

b) Write a Python program to Print all factors of number and print if the no is perfect number

c) Write a Python Program to search an element in array and display its location (Create Definition searchInArray(element,array)

(Exercise: <https://www.w3resource.com/python-exercises/python-functions-exercises.php> )