

INDEX

| Sl. No | Name of the Experiment | Date | Page No | Initial of the Teacher |
|--------------------|--|------------|---------|------------------------|
| Lab Cycle 1 | | | | |
| 1 | Write a program that prompts the user to enter his first name and last name and then displays a message “Greetings!!! First name Last name”. | 25/09/2023 | 1 | |
| 2 | Write a program to demonstrate different number data types in python? | 25/09/2023 | 2 | |
| 3 | Write a program to calculate the area of a circle by reading inputs from the user. | 25/09/2023 | 3 | |
| 4 | Write a program to calculate the volum of a sphere by reading inputs from the user. | 25/09/2023 | 4 | |
| 5 | Write a program to calculate the salary of an employee given his basic pay (to be entered by theuser). HRA = 10 percent of the basic pay, TA = 5 percent of the basic pay. | 25/09/2023 | 5 | |
| 6 | Write a Python program to perform arithmetic operations on two integer numbers. | 25/09/2023 | 6 | |
| 7 | Write a Python program to get a string which is n (non-negative integer) copies of a given string. | 7/10/2023 | 7 | |
| Lab Cycle 2 | | | | |
| 8 | Find biggest of 3 numbers entered. | 7/10/2023 | 8 | |
| 9 | Accept an integer n and compute n+nn+nnn. | 7/10/2023 | 9 | |
| 10 | Create a string from the given string where the first and last character are exchanged. | 7/10/2023 | 10 | |
| 11 | Write a program to prompt the user for a list of integers. For all values greater than 100, store ‘over’ instead. | 7/10/2023 | 11 | |
| 12 | Store a list of first names. Count the occurrences of ‘a’ within the list. | 7/10/2023 | 13 | |
| 13 | Write a program to prompt the user to enter two lists of integers and check (a) Whether lists are of the same length. (b)Whether the list sums to the same value. (c) Whether any value occurs in both Lists. | 12/10/2023 | 15 | |

| Sl. No | Name of the Experiment | Date | Page No | Initial of the Teacher |
|--------------------|---|------------|---------|------------------------|
| 14 | Write a Python program to count the occurrences of each word in a line of text. | 12/10/2023 | 17 | |
| 15 | Get a string from an input string where all occurrences of the first character are replaced with '\$', except the first character. | 12/10/2023 | 18 | |
| 16 | Create a single string separated with space from two strings by swapping the character at position 1. | 12/10/2023 | 19 | |
| 17 | Write a python program to read two lists color-list1 and color-list2. Print out all colors from color-list1 not contained in color-list2. | 12/10/2023 | 20 | |
| 18 | Create a list of colors from comma-separated color names entered by the user. Display first and last colors. | 12/10/2023 | 21 | |
| 19 | From a list of integers, create a list after removing even numbers. | 12/10/2023 | 22 | |
| 20 | Count the number of characters (character frequency) in a string. | 26/10/2023 | 24 | |
| 21 | Add 'ing' at the end of a given string. If it already ends with 'ing', then add 'ly' | 26/10/2023 | 25 | |
| 22 | Accept a list of words and return the length of the longest word. | 26/10/2023 | 26 | |
| 23 | List comprehensions | 26/10/2023 | 27 | |
| 24 | Sort dictionary in ascending and descending order. | 26/10/2023 | 29 | |
| 25 | Merge two dictionaries | 26/10/2023 | 31 | |
| Lab Cycle 3 | | | | |
| 26 | Write a program to find the factorial of a number. | 26/10/2023 | 33 | |
| 27 | Write a program to generate Fibonacci series of N terms. | 26/10/2023 | 34 | |
| 28 | Write a program to find the sum of all items in a list. [Using for loop] | 26/10/2023 | 35 | |
| 29 | Generate a list of four-digit numbers in a given range with all their digits even and the number is a perfect square. | 06/11/2023 | 36 | |

| Sl. No | Name of the Experiment | Date | Page No | Initial of the Teacher |
|--------------------|--|------------|---------|------------------------|
| 30 | Write a program using a for loop to print the multiplication table of n, where n is entered by the user. | 06/11/2023 | 37 | |
| 31 | Display the given pyramid with the step number accepted from the user. | 06/11/2023 | 38 | |
| 32 | Write a program to generate all factors of a number. [use while loop] | 06/11/2023 | 39 | |
| 33 | Write a program to print the reverse of a number. [use while loop] | 06/11/2023 | 40 | |
| 34 | Write a program to find whether the given number is an Armstrong number or not. [use while loop] | 06/11/2023 | 41 | |
| 35 | Display star pattern using nested loop | 06/11/2023 | 42 | |
| Lab Cycle 4 | | | | |
| 36 | Write a program using functions to calculate the simple interest. Suppose the customer is a senior citizen. He is being offered a 12 percent rate of interest, for all other customers, the rate of interest is 10 percent. | 06/11/2023 | 43 | |
| 37 | Write a program using functions and return statements to check whether a number is even or odd. | 16/11/2023 | 45 | |
| 38 | Write a function called compare which takes two strings S1 and S2 and an integer n as arguments. The function should return True if the first n characters of both the strings are the same else the function should return False. | 16/11/2023 | 46 | |
| 39 | Write a program to print the Fibonacci series using recursion. | 16/11/2023 | 47 | |
| 40 | Write a program to add variable length integer arguments passed to the function. | 16/11/2023 | 48 | |
| 41 | Write lambda functions to find the area of square, rectangle and triangle. | 16/11/2023 | 49 | |
| 42 | Write a program to display powers of 2 using anonymous function. | 23/11/2023 | 51 | |
| 43 | Write a program to sum the series $1/1! + 4/2! + 27/3! + \dots + \text{nth term}$. | 23/11/2023 | 52 | |

| Sl. No | Name of the Experiment | Date | Page No | Initial of the Teacher |
|--------------------|---|------------|---------|------------------------|
| Lab Cycle 5 | | | | |
| 44 | Write a program to determine whether a given year is a leap year [Use Calendar Module] | 23/11/2023 | 53 | |
| 45 | Python Modules: time and datetime Module | 23/11/2023 | 54 | |
| 46 | Write a python program to print yesterday, today and tomorrow. | 30/11/2023 | 56 | |
| 47 | Write a function in file Armstrong.py to check whether a number is an Armstrong number. Import the module to generate Armstrong numbers between two limits. | 30/11/2023 | 57 | |
| 48 | Create a package graphics with modules rectangle, circle and sub-package 3D-graphics with modules cuboid and sphere. Include methods to find area and perimeter of respective figures in each module. Write programs that find the area and perimeter of figures by different importing statements. (Include selective import of modules and import * statements) | 08/12/2023 | 59 | |
| Lab Cycle 6 | | | | |
| 49 | Define a class to represent a bank account. Include the following details like name of the depositor, account number, type of account, balance amount in the account. Write methods to assign initial values, to deposit an amount, withdraw an amount after checking the balance, to display details such as name, account number, account type and balance. | 08/12/2023 | 62 | |
| 50 | Create a class Publisher with attributes publisher id and publisher name. Derive class Book from Publisher with attributes title and author. Derive class Python from Book with attributes price and no_of_pages. Write a program that displays information about a Python book. Use base class constructor invocation and method overriding. | 08/12/2023 | 64 | |
| 51 | Write a program that has an abstract class Polygon. Derive two classes Rectangle and Triangle from Polygon and write methods to get the details of their dimensions and hence | 15/12/2023 | 66 | |

| | calculate the area. | | | |
|--------------------|--|------------|---------|------------------------|
| Sl. No | Name of the Experiment | Date | Page No | Initial of the Teacher |
| 52 | Create a Rectangle class with attributes length and breadth and methods to find area and perimeter. Compare two Rectangle objects by their area. | 15/12/2023 | 68 | |
| 53 | Create a class Time with private attributes hour, minute and second. Overload '+' operator to find sum of 2 times. | 15/12/2023 | 70 | |
| 54 | Write a program that validates name and age as entered by the user to determine whether the person can cast a vote or not. | 15/12/2023 | 72 | |
| 55 | Write a program that prompts the user to enter a number. If the number is positive or zero print it, otherwise raise a 'ValueError' Exception. | 04/01/2024 | 74 | |
| Lab Cycle 7 | | | | |
| 56 | Write a Python program to read a file line by line and store it into a list. | 04/01/2024 | 75 | |
| 57 | Python program to copy odd lines of one file to other. | 04/01/2024 | 76 | |