**IT11 - Python Programming**

**Practical Assignments**

**A.Y 2025-26**

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| Sr Nbr | Assignment | Test data Input | Test data output |
| 1 | Write a program to determine if a given string is a palindrome or not using combination of positive and negative indexing. Take the string as an input from the user. | “Madam”  “College” | Palindrome  Not a palindrome |
| 2 | Without using count() demonstrate the use of for loop to determine the number of occurrences of a given character in a string. Take the string and character from the user. | String : This is the tree of Teal Character ‘T’ | 2 |
| 3 | Without using ready made methods, write a program to find factorial of a given number. Take the number from the user. | 9 | 362880 |
| 4 | Without using any ready made methods, write a program in Python to reverse the words in a given string. Take the string from the user. | This is a dog | dog a is This |
| 5 | Without using any ready made methods, write a program in Python to check if the given number is an Armstrong number or not. Take the number from the user. Eg : If the number is 153 O/p - 153 is an Armstrong number. If the number is 25 O/p - 25 is not an armstrong number | 153  25 | 153 is an Armstrong number  25 is not an Armstrong number |
| 6 | Without using readline() demonstrate a way in Python to read a multi line file line by line. |  |  |
| 7 | Using readlines() demonstrate a way to return the total number of NON BLANK lines in a file |  |  |
| 8 | Using file writing methods, to write a message from the user to a file. |  |  |
| 9 | Write a class Student having attributes, name, rollNumber,mathsMks,scienceMks and engMks. Use getters and setters for these attributes.  Write another class Marksheet having the attributes totalMks and percentage. Define a method calculateMarks() and calculatePercentage().  Create a student class object in Marksheet class. Assign name, roll number, maths, science and english marks to the student class object. Invoke Invoke calculateMarks() and calculatePercentage() using the data of this Student object |  |  |
| 10 | Using the concept of class, public and non-public attributes and methods write a program to calculate the area of a rectangle. |  |  |
| 11 | Write a class Employee having attributes name, dept, sal. Add a method, calculate\_salary(). This method should calculate the salary using the logic, 30\*2000. Print the final salary calculated.  Write a subclass, SalesEmployee having attribute no\_of\_leads. Override calculate\_salary() which uses the formula,  salary = 30\*2000\*no\_of\_leads  Write another subclass, ManufacturingEmployee having attribute no\_of\_extra\_hours. Override calculate\_salary() which uses the formula,  salary = 30\*20\*no\_of\_extra+hours  In a separate file, EmployeeSalary.py create objects of these classes and invoke their respective calculate\_salary(). |  |  |
| 12 | Design a calculator utility module having methods for addition, subtraction, division and multiplication. Use this module in a different file which takes the numbers from the user and the choice of operation. Exhibit support for arbitrary arguments in addition, subtraction and multiplication methods. |  |  |