

**MUTHOOT INSTITUTE OF TECHNOLOGY & SCIENCE**

**VARIKOLI P O, PUTHENCRUZ,**

**ERNAKULAM DISTRICT, PIN 682308**

**Department of Computer Applications**

**MASTER OF COMPUTER APPLICATIONS**

**SEMESTER 1**

**LAB RECORD**

**20MCA131 PROGRAMMING LAB**

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| **Name : ………………………………………………………**  **Register Number : ………………………………………..**  **Month : ……………………………Year: ……………….** |



***Certificate***

*Certified that this is the Bonafide Record of Practical work done in the Vinton Cerf Lab of Muthoot Institute of Technology and Science by* ***Reg.No:****.......…………….............................................*

***Name:****………………………………………………………………………..*

*for the partial fulfillment of the requirement for the award of the degree of Master of Computer Applications during the year 2024-25.*

Head of the Department Faculty in Charge

University Exam Reg. No……………………………...

Date of Examination………………………….

Internal Examiner External Examiner



**Vision of Institute**

To be a centre of excellence for learning and research in engineering and technology, producing intellectually well-equipped and socially committed citizens possessing an ethical value system.

**Mission of Institute**

* Offer well-balanced programme of instruction, practical exercise and opportunities in technology.
* Foster innovation and ideation of technological solutions on sustainable basis.
* Nurture a value system in students and engender in them a spirit of inquiry.

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| **CO1** | **Understands basics of Python Programming language including input/output functions, operators, basic and collection data types** |  |  |
| 1 | Familiarizing Text Editor, IDE, Code Analysis Tools etc. | 26/09/2024 | 1 |
| 2 | Display future leap years from current year to a final year entered by user | 03/10/2024 | 4 |
| 3 | List comprehensions:  (a) Generate positive list of numbers from a given list of integers (b) Square of N numbers (c) Form a list of vowels selected from a given word (d) List ordinal value of each element of a word (Hint: use ord() to get ordinal values) | 03/10/2024 | 5 |
| 4 | Count the occurrences of each word in a line of text. | 08/10/2024 | 7 |
| 5 | Prompt the user for a list of integers. For all values greater than 100, store ‘over’ instead | 08/10/2024 | 8 |
| 6 | Store a list of first names. Count the occurrences of ‘a’ within the list | 08/10/2024 | 9 |
| 7 | Enter 2 lists of integers. Check (a) Whether list are of same length (b) Whether list sums to same value (c) Whether any value occur in both | 08/10/2024 | 10 |
| 8 | Get a string from an input string where all occurrences of first character replaced with ‘$’, except first character. [eg: onion -> oni$n] | 08/10/2024 | 11 |
| 9 | Create a string from given string where first and last characters exchanged. [eg: python - > nythop] | 10/10/2024 | 12 |
| 10 | Accept the radius from user and find area of circle. | 10/10/2024 | 13 |
| 11 | Find biggest of 3 numbers entered | 10/10/2024 | 14 |
| 12 | Accept a filename from user and print extension of that. | 10/10/2024 | 15 |
| 13 | Create a list of colors from comma-separated color names entered by user. Display first and last colors. | 10/10/2024 | 16 |
| 14 | Accept an integer n and compute n+nn+nnn. | 15/10/2024 | 17 |
| 15 | Print out all colors from color-list1 not contained in color-list2 | 15/10/2024 | 18 |
| 16 | 17Create a single string separated with space from two strings by swapping the character at position 1 | 15/10/2024 | 19 |
| 17 | Sort Dictionary in ascending and descending order | 15/10/2024 | 20 |
| 18 | Merge two dictionaries. | 15/10/2024 | 21 |
| 19 | Find gcd of 2 numbers | 22/10/2024 | 22 |
| 20 | From a list of integers, create a list removing even numbers. | 22/10/2024 | 23 |
| **CO2** | **Implement decision making, looping constructs and functions** |  |  |
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| 2 | Generate Fibonacci series of N terms | 22/10/2024 | 25 |
| 3 | Find the sum of all items in a list | 24/10/2024 | 26 |
| 4 | Generate a list of four digit numbers in a given range with all their digits even and the number is a perfect square. | 24/10/2024 | 27 |
| 5 | Display the given pyramid with step number accepted from user. Eg: N=4  1  2 4  3 6 9  4 8 12 16 | 24/10/2024 | 28 |
| 6 | Count the number of characters (character frequency) in a string. | 24/10/2024 | 29 |
| 7 | Add ‘ing’ at the end of a given string. If it already ends with ‘ing’, then add ‘ly’ | 24/10/2024 | 30 |
| 8 | Accept a list of words and return length of longest word. | 29/10/2024 | 31 |
| 9 | Construct following pattern using nested loop  \*  \* \*  \* \* \*  \* \* \* \*  \* \* \* \* \*  \* \* \* \*  \* \* \*  \* \*  \* | 29/10/2024 | 32 |
| 10 | Generate all factors of a number. | 29/10/2024 | 33 |
| 11 | Write lambda functions to find area of square, rectangle and triangle. | 29/10/2024 | 34 |
| **CO3** | **Design modules and packages - built in and user defined packages** |  |  |
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| 2 | 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 finds area and perimeter of figures by different importing statements. (Include selective import of modules and import \* statements) | 13/11/2024 | 37 |
| **CO4** | **Implement object-oriented programming and exception handling.** |  |  |
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