**Python Programming Lab Exercise**

1. Write a python program to find the sum of odd and even natural numbers.
2. Write a python program to find the sum of the following series. x-x2+x3-x4…+ xn
3. Write a python program to find the sum of the following series. +++…
4. Write a python program to reverse a given integer and write the steps.
5. Write a python program to shift the last digit into first. For example 1234 is converted into 4123.
6. Write a python program to create 5 students marks using list and find the pass/fail in each.
7. Write a python program to find the roots of the Quadratic equation using the formula
8. Write a python program to display integer into words. For example 514 should be displayed FIVE ONE FOUR
9. Write a python program to shift the first digit into last. For example 1234 is converted into 2341.
10. Write a python program to find the given number is Armstrong number or not?.
11. Write a python program to find matrix multiplication.
12. Write a python program to find the sum of the following series. x+x2+x3+x4…+ xn
13. Write a python program to display integer into words. For example 123 should be displayed ONE TWO THREE
14. Write a python program to validate the text field of username and password.
15. Write a python program to encode and decode a given string with the following key pattern.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Replace/encode | ‘a’ | ‘x’ | ‘m’ | ‘r’ | ‘y’ |
| With(key) | ‘b’ | ‘c’ | ‘l’ | ‘v’ | ‘z’ |

1. Write a python program to display all Fibonacci numbers between 1000 and 2000 using function.
2. Write a python program to find the discount of sale using the following table.

|  |  |  |
| --- | --- | --- |
| S.NO | Amount range | Discount % |
| 1. | 1000 - 5000 | 5% |
| 2. | 5000 - 10000 | 20% |
| 3. | 10000 - 50000 | 30% |
| 4. | >50000 | 50% |

**FUNCTIONS**

1. Display all leap years between 1000 and 2000 using function.
2. Display multiplication table using function.
3. Write a python program to find the area of triangle, rectangle and square using function.
4. Write a python program to find the factorial of a number using function.

**LIST, TUPLE, DICTIONARY**

1. Write a python program to find the greatest number in a list.
2. Write a python program to display first two lowest numbers in a list. For example the list contains 10, 20,5,13, 21. The output should be 5, 10.
3. Write a python program to display first two maximum numbers in a list.

For example the list contains 10, 20,5,13, 21. The output should be 21, 20.

1. Write a python program to add the student details in to dictionary.
2. Write a python program to reverse the numbers in the list.
3. Write a python program to arrange the list in ascending order.
4. Write a python program to initialize to zero for all fields in the list.
5. Write a python program to inverse a given matrix.
6. Write a python program to find the sum of all diagonal elements in a given matrix.
7. Write a python program to find the average of given list.
8. Write a python program to access, update, and delete the elements in a tuple.
9. Write a python program to create 5 students marks using dictionary and find the pass/fail in each.
10. Write a python program to find a given number is present in a list using binary search.

**FILES**

1. Write a python program to copy the text from one file to another file.
2. Write a python program to find and replace a given word in a file.
3. Write a python program to find how many boys and girls names are present in a file.
4. Write a python program to count how many times the given word is repeated in a file.
5. Write a python program to read a file and count how many number of character, words and line
6. Write a python program to encrypt the text file content with any keys.
7. Write a python program to count how many times the given character repeated in a file.
8. Write a python program to read a file and count how many number of character, words and line

**MYSQL and GUI**

1. Write a python program to accept and display the first name and last name from the text boxes.
2. Write a python program to accept and display username and password from the text box.
3. Write a python-mysql program to insert the data into registration database.
4. Write a python-mysql program to select and display the employee record from the registration database.
5. Write a python program to book the cinema ticket, which has the facility to book, cancel and display available tickets.
6. Write a python program to read a file and count how many number of character, words and lines.
7. Write a python GUI program to insert the employee data into mysql database.
8. Write a python program to authenticate the username and password in the text box.
9. Write a python-mysql connectivity program to create the employee table with the fields such as first name, last name, age, sex, salary.
10. Write a python-mysql connectivity program to select and display the employee record from the registration database.