

## Practical List

Sr. No.	Practical	Page No.
1.	<p>Write a Python Program</p> <ul style="list-style-type: none"> <li>- To check if a number is Positive, Negative or Zero</li> <li>- To find Factorial of a Number</li> <li>- To Print the Fibonacci sequence</li> <li>- To Print Multiplication Table</li> <li>- Python Program to Check Armstrong Number (A number is called Armstrong number if it is equal to the sum of the cubes of its own digits. For example: 153 is an Armstrong number since <math>153 = 1*1*1 + 5*5*5 + 3*3*3</math>.)</li> </ul> <p>Use appropriate conditional constructs, looping constructs and function.</p>	1
2.	WAP to convert temperature of 10 cities into Fahrenheit using lambda and map function.	3
3.	WAP to accept a list of numbers as an input. If input is greater than 3 then perform addition of even numbers. Make a use of map, reduce and lambda function.	4
4.	WAP to create your own arithmetic module and perform arithmetic operations.	5
5.	WAP to create Operator package and perform logical operations.	6
6.	Write a generator function to perform sum of n even numbers.	7
7.	WAP to implement multiple decorators or chaining decorators.	8
8.	WAP to create abstract class and display the details. (Any suitable example)	9
9.	WAP to implement encapsulation. (Any suitable example)	10
10.	Python Program to Calculate the employee salary using Inheritance as Class A will have detail of the employee such as employee ID, Name, Designation, and Department. Class B will have Gross salary such as Basic Salary, DA, HRA,TA and Gross Salary. Class C will have Deduction Salary as Income tax and any other deduction. Class D will have Net Salary.	11
11.	WAP to Implement function overloading and operator overloading.	13
12.	WAP to develop simple web scraping application to scrap data from websites. Make a use of required regular expressions.	15
13.	<p>WAP to validate</p> <p>1. E-mail id 2. Password 3. Mobile number 4. URL</p> <p>Using regular expressions.</p>	16
14.	<p>WAP to check the age as even or odd by rasing.</p> <p>Built-in exception and User defined Exception</p>	17
15.	Write a Python program to illustrate multithreading.	18
16.	<p>Write a program to,</p> <p>1. Create a new file. 2. Append data 3. Read data</p> <p>Use exception handling to handle IO Error</p>	19
17.	Create Hospital and doctor tables with following fields as- (use MongoDB database)	20

	<p>Hospital Table :-&gt; (Hospital_Id INT UNSIGNED NOT NULL, Hospital_Name TEXT NOT NULL, Bed_Count INT, PRIMARY KEY (Hospital_Id))</p> <p>Doctor table:-&gt; (Doctor_Id INT UNSIGNED NOT NULL, Doctor_Name TEXT NOT NULL, Hospital_Id INT NOT NULL, Joining_Date DATE NOT NULL, Speciality TEXT NULL, Salary INT NULL, Experience INT NULL, PRIMARY KEY (Doctor_Id))</p> <p>Executes following</p> <ol style="list-style-type: none"> <li>1 Insert 10 records in both Hospital and doctor tables. Display all the records.</li> <li>2 Fetch Hospital and Doctor Information using hospital Id and doctor Id. (Take a input from user for hospital id and doctor id and display the result accordingly.)</li> <li>3 Fetch all doctors whose salary higher than the input amount and specialty is the same as the input specialty.</li> <li>4 Update doctor experience in years.</li> </ol>	
18.	<p>Create a single dimensional array using numpy and executes following commands.</p> <ol style="list-style-type: none"> <li>1. Type of array, dimension of array, shape of array, size of array.</li> <li>2. Reshape array</li> <li>3. flatten and transpose</li> <li>4. Zeros</li> <li>5. Ones</li> <li>6. Linspace</li> <li>7. random and</li> <li>8. sum of array.</li> </ol>	22
19.	<p>Create array A and array B using arange() and perform following operations. Addition, Subtraction, Multiplication</p>	24
20.	<p>WAP to Find out space and time utilized by list and array to solve same problem.</p>	25
21.	<p>WAP to create a pandas series student and store details like student_id, name, age, mobile and marks.</p>	27
22.	<p>WAP to create a data frame student with fields stude_id, name, class, marks in sub1,sub2,sub3,sub4,sub5, practical, project.</p> <ol style="list-style-type: none"> <li>1 Convert data frame into CSV file</li> <li>2 Load created CSV file</li> <li>3 Calculate total and add new column using lambda function.</li> <li>4 Calculate percentage</li> <li>5 Fetch the students having percentage greater than equal to 70</li> </ol>	28
23.	<p>Read titanic.csv file and perform following,</p> <ol style="list-style-type: none"> <li>1 Drop unwanted column</li> <li>2 Encode Male as 1 and Female as 2</li> <li>3 Find out the ratio of Male and Female</li> <li>4 Treat missing values</li> <li>5 Treat outliers if any</li> <li>6 Rename columns</li> <li>7 Plot a graph of Gender</li> </ol>	30
24.	<p>Create lists holding weight and height respectively of 20 person and visualize the relationship using matplotlib and seaborn libraries.</p>	31
25.	<p>Perform Covid-19 data Analysis. (Take current data of world)</p>	32