LIST OF PROGRAMS (FOR REFERENCE)

1	Write a Python program to draw a scatter plot with empty circles taking a random distribution in X and Y and plotted against each other.
2	Write a Python program to draw a scatter plot using random distributions to generate balls of different sizes.
3	Write a Python program to draw a scatter plot comparing two subject marks of Mathematics and Science. Use marks of 10 students. Sample data:math_marks = [88, 92, 80, 89, 100, 80, 60, 100, 80, 34]science_marks = [35, 79, 79, 48, 100, 88, 32, 45, 20, 30]marks_range = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]
4	Write a Python script to concatenate following dictionaries to create a new one. Sample Dictionary : dic1={1:10, 2:20} dic2={3:30, 4:40} dic3={5:50,6:60} Expected Result : {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}
5	Write a Python script to check whether a given key already exists in a dictionary.
6	Write a Python script to generate and print a dictionary that contains a number (between 1 and n) in the form (x, x*x).Sample Dictionary (n = 5) : Expected Output : {1: 1, 2: 4, 3: 9, 4: 16, 5: 25}
7	Write a Python program to remove a key from a dictionary
8	Write a Python program to map two lists into a dictionary.
9	Write a Python program to print all unique values in a dictionary Sample Data : [{"V":"S001"}, {"V": "S002"}, {"VI": "S001"}, {"VI": "S005"}, {"VII":"S005"}, {"V":"S009"},{"VIII":"S007"}] Expected Output : Unique Values: {'S005', 'S002', 'S007', 'S001', 'S009'}
10	Write a Python program to create a dictionary from a string. Note: Track the count of the letters from the string.
11	Write a program that takes a sentence as an input parameter where each word in the sentence is separated by a space. Then replace each blank with a hyphen and then print the modified sentence.
12	Write a program to randomly select 10 integer elements from range 100 to 200 and find the smallest among all.
13	Create a dictionary of 5 countries with their currency details and display them.
	Print as below
	First line
	Second line
	Third Line
14	Declare complex number , find data type, real part, imaginary part, complex conjugate, absolute value of a number
15	Change string hello to help ,remove white spaces before word if s=" hello "
16	Write a program to randomly select 10 integer elements from range 100 to 200 and find the smallest among all.
17	Swap first & last letter of a string
18	Find if substring is present in string or not
19	Write a program that takes a sentence as an input parameter where each word in the sentence is separated by a space. Then replace each blank with a hyphen and then print the modified sentence.
20	WAPP to test whether string is palindrome or not
21	WAP to capitalize the first character of each words from a given sentence (example: all the best All The Best)
22	WAP to count the frequency of occurrence of a given character in a given line of text
23	Create a dictionary of 4 states with their capital details & add one more pair to the same
24	To count number digits, special symbols from the given sentence. Also count number of vowels and consonants
25	Write a program to accept any string up to 15 characters. Display the elements of string with their element nos
26	Create a Numpy array filled with all ones
27	Check whether a Numpy array contains a specified row
28	Compute mathematical operations on Array, Add & Multiply two matrices
29	Find the most frequent value in a NumPy array
30	Flatten a 2d numpy array into 1d array
31	Calculate the sum of all columns in a 2D NumPy array
32	Calculate the average, variance and standard deviation in Python using NumPy
33	Insert a space between characters of all the elements of a given NumPy array ['Python' 'is' 'easy'] ['P y t h o n' 'i s' 'e a s y']
34	Plot line graph from NumPy array
35	WAP to Reverse a Number
36	WAP to read number N and print natural numbers summation pattern
37	WAP to determine all Pythagorean triplets
38	WAP, You are given a number A which contains only digits 0's and 1's. Your task is to make all digits same by just flipping one digit (i.e. 0 to 1 or 1 to 0) only. If it is possible to make all the digits same by just flipping one digit then print 'YES' else print 'NO'.
39	Given a list A of N distinct integer numbers, you can sort the list by moving an element to the end of the list. Find the minimum number of moves required to sort the list using this method in ascending order
40	WAP to print following pattern
	1\n
	22\n
	333\n
	4444\n
	55555\n
	666666
41	Convert two lists into a dictionary
42	Check how many times a given number can be divided by 6 before it is less than or equal to 10.
43	Python program to read a file and Capitalize the first letter of every word in the file
44	Python program that reads a text file and counts number of times certain letter appears in the text file
45	Write a program to write content to file & append data to file
46	Python program to read the contents of a file
47	Copy the contents from one file to another ‘
48	WAP to accept name and roll number of students and store it in file. Read and display the stored data. Also check if file exists or not
49	WAP to copy contents of 1 file to another Let user specify name of source and destination files
50	Python program to read file word by word
51	Python program to read character by character from a file

52	Python – Get number of characters, words, spaces and lines in a file
53	Make your exception class “InvalidMarks” which is thrown when marks obtained by student exceeds 100
54	WAP that accepts the values of a, b, c and d. Calculate and display ((a+d) + (b*c))/ (b*d). create user defined exception to display proper message when value of (b*d) is zero
55	Ask user to input an age. Raise an exception for age less than 18 , print message “ age is not valid ” & “age is valid ” if age entered is more than 18
56	48Handle the FileNotFoundError exception
57	Raise a TypeError if x is not a string
58	Create class Complex , define two methods init to take real & imaginary number & method add to add real & imaginary part of complex number . print addition of real part & addition of imaginary part.
59	Create class Triangle, Create object from it . The objects will have 3 attributes named a,b,c that represent sides of triangle .Triangle class will have two methods init method to initialize the sides & method to calculate perimeter of triangle from its sides . Perimeter of triangle should be printed from outside the class
60	Python program to append ,delete and display elements of a list using classe
61	Write a program to create a class which performs basic calculator operations
62	Write a Python class named Student with two attributes student_id, student_name. Add a new attribute student_class. Create a function to display the entire attribute and their values in Student class.
63	Write a Python class to reverse a string word by word.
64	Write a Python class which has two methods get_String and print_String. get_String accept a string from the user and print_String print the string in upper case
65	Write a Python class named Circle constructed by a radius and two methods which will compute the area and the perimeter of a circle.
66	Write a Python program to create a Vehicle class with max_speed and mileage instance attributes. Create a child class Bus that will inherit all of the variables and methods of the Vehicle class
67	Load a dataset using pandas : perform basic operations , data visualization using matplotlib ,seaborn etc
68	WAPP to push all zeros to the end of a given list. The order of elements should not change:
	Input: 0 2 3 4 6 7 9 0
	Output:2 3 4 6 7 9 0 0
69	Write a program that accepts a comma separated sequence of words as input and prints the words in a comma separated sequence after sorting them alphabetically.
	Input: without, hello,bag, world
	Output: bag,hello,without,world
70	WAP that calculates & prints value accoridng to given formula:
	Q=Square root of [(2*C*D)/H]
	C is 50 , H is 30. D is variable whose values should be input to program in comma separated sequence.
	Input: 100,150,180
	Output:18,22,24
71	With given list L of integers , write a program that prints this L after removing duplicate values with original order preserved.
	Input: 12 24 35 24 88 120 155 88 120 155
	Output: 12 24 35 88 120 155
72	Given ab integer number n , define function named printDict(),which can print a dictionary where keys are numbers between 1 to n (both included) and values are square of keys . Function printDict(), does not take any arguments.
73	Python program to find the sum of the digits of an integer using while loop
74	Python program to generate the prime numbers from 1 to N
75	Python program to print the numbers from a given number n till 0 using recursion
76	Write a Python function student_data () which will print the id of a student (student_id). If the user passes an argument student_name or student_class the function will print the student name and class.
77	Write a Python class to convert a roman numeral to an integer
78	Write a Python class to get all possible unique subsets from a set of distinct integers
79	Write a Python class to find a pair of elements (indices of the two numbers) from a given array whose sum equals a specific target number
80	Write a Python class to implement pow(x, n).
81	Write a NumPy program to convert the values of Centigrade degrees into Fahrenheit degrees and vice versa. Values are stored into a NumPy array. Sample Array [0, 12, 45.21, 34, 99.91]
82	Write a NumPy program to find the set difference of two arrays. The set difference will return the sorted, unique values in array1 that are not in array2
83	Write a Pandas program to create and display a DataFrame from a specified dictionary data which has the index labels. Go to the editor Sample Python dictionary data and list labels: exam_data = {'name': ['Anastasia', 'Dima', 'Katherine', 'James', 'Emily', 'Michael', 'Matthew', 'Laura', 'Kevin', 'Jonas'], 'score': [12.5, 9, 16.5, np.nan, 9, 20, 14.5, np.nan, 8, 19], 'attempts': [1, 3, 2, 3, 2, 3, 1, 1, 2, 1], 'qualify': ['yes', 'no', 'yes', 'no', 'no', 'yes', 'yes', 'no', 'no', 'yes']} labels = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j'
84	Write a Pandas program to get the first 3 rows of a given DataFrame
85	Write a Pandas program to select the 'name' and 'score' columns from the following DataFrame.
86	Write a Pandas program to select the specified columns and rows from a given data frame.
87	Write a Pandas program to select the rows where the number of attempts in the examination is greater than 2.
88	Write a Pandas program to count the number of rows and columns of a DataFrame.
89	Write a Pandas program to select the rows the score is between 15 and 20 (inclusive).
90	Write a Pandas program to select the rows where number of attempts in the examination is less than 2 and score greater than 15
91	Write a Pandas program to append a new row 'k' to data frame with given values for each column. Now delete the new row and return the original DataFrame
92	Write a Pandas program to sort the DataFrame first by 'name' in descending order, then by 'score' in ascending order.
93	Write a Pandas program to replace the 'qualify' column contains the values 'yes' and 'no' with True and False.
94	Write a Pandas program to set a given value for particular cell in DataFrame using index value.