

Week-1: Tutorial Questions

1. Python Program to convert temperature in Celsius to Fahrenheit -
2. Python Program to find the area of Triangle
3. Python program to swap two variables
4. Python Program for simple interest.
5. Python Program for compound interest.
6. Python Program for Program to find area of a circle.
7. Python Program to Display Calendar
8. Python Program to Find ASCII Value of Character
9. Python Program to Convert Decimal to Binary, Octal and Hexadecimal
10. Python Program to Find the Square Root -

Week-2: Tutorial Questions (Conditional Statements)

11. Python Program to Check the Greatest among Three Numbers -
12. Python Program to Check the number is divisible by 2, 3 or 5
13. Python Program to Solve Quadratic Equation -
14. Python program to check if the number is positive or negative or zero and display an appropriate message
15. Python Program to Check Leap Year
16. Python program to check the validity of password input by users.
17. Python program to convert the month name to a number of days.
18. Python program for Telangana electricity slab or tariff rates

Category 1(between - 0 to 100)

0-50 Units	- ₹1.45 consumer charges	: 25₹
51-100 units	- ₹ 2.60 consumer charges	: 30₹

Category 2(between - 100 to 200)

0-100 Units	- ₹3.30 consumer charges	: 50₹
101-200 units	- ₹ 4.30 consumer charges	: 50₹

Category 3(more than 200 units)

0-200 Units	- ₹ 5 consumer charges	: ₹60
201-300 units	- ₹ 7.20 consumer charges	: ₹60
301-400 units	- ₹ 8.50 consumer charges	: ₹80
401-800 units	- ₹ 9 consumer charges	: ₹80
Above 800 Units	- ₹ 9.5 consumer charges	: ₹80

19. Python Program to calculate income tax

20. Python Program to calculate BMI

Week-3: Tutorial Questions (loops)

21. Python program to take input from the user until a vowel is entered

22. Python Program to Check Prime Number

23. Python Program to Print all Prime Numbers in an Interval

24. Python Program to Find the Factorial of a Number

25. Python Program to Check if a Number is Odd or Even

26. Python Program to Print the Fibonacci sequence

27. Python Program to Check Armstrong Number

28. Python Program to Find Armstrong Number in an Interval

29. Write a python program to print the square of all numbers from 0 to 10

30. Write a python program to find the sum of all even numbers from 0 to 10

31. Write a python program to read three numbers (a,b,c) and check how many numbers between 'a' and 'b' are divisible by 'c'

32. Write a python program to read a number and print a right triangle using
"**"

33. Python program to print a multiplication table of a given number

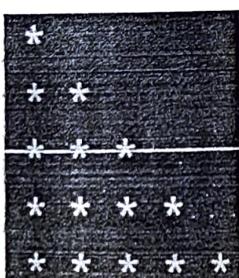
34. Python program to count the total number of digits in a number.

35. Python program to count the number of even and odd numbers from a series of numbers.

36.Python program to display all numbers within a range except the prime numbers.

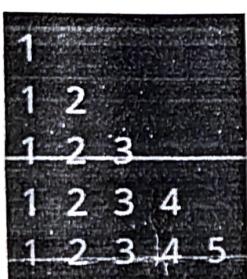
37.Python Program to Check Whether a String is Palindrome or Not

38.Python programs to print the following half pyramid

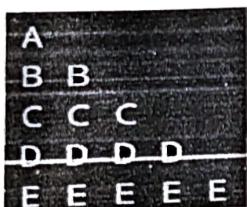


```
for i in range(1,6):
    for j in range(1,i+1):
        print("*", end=" ")
    print()
```

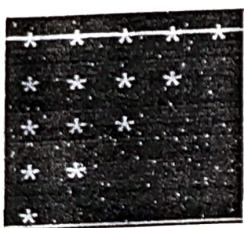
39.Python programs to print the following half pyramid



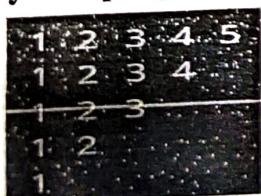
40.Python programs to print the following half pyramid



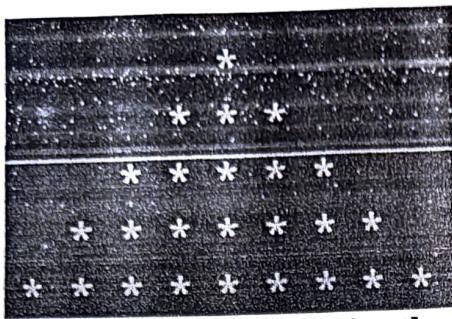
41.Python programs to print the following inverted half pyramid



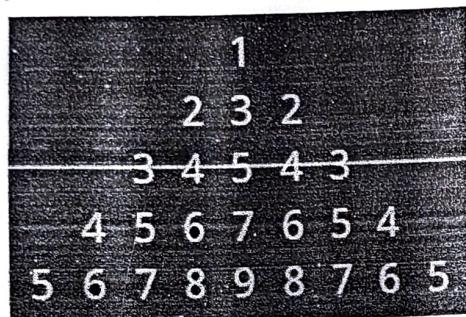
42.Python programs to print the following inverted half pyramid



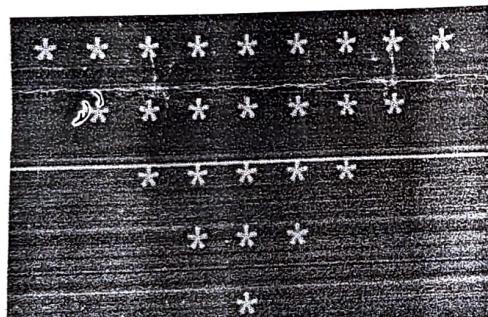
43. Python programs to print the following pyramid



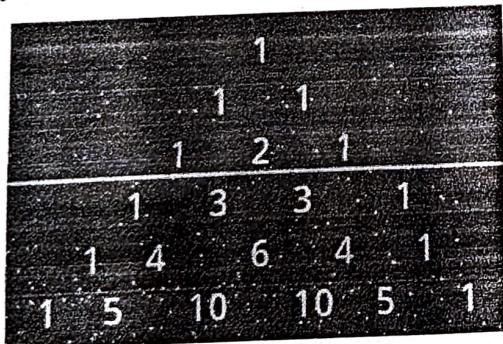
44. Python programs to print the following pyramid



45. Python programs to print the following pyramid

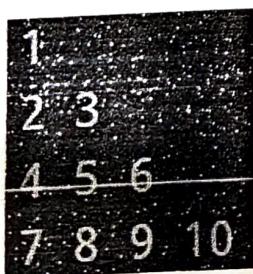


46. Python programs to print the following Pascal's Triangle



```
n = int(input('enter no. of rows'))  
for i in range(n):  
    num = 1  
    for j in range(i+1):  
        print(num, end = " ")  
        num = num * (i-j) // (j+1)  
    print()
```

47. Python programs to print the following Pascal's Triangle



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Exercise Programs – List -2 (48 to 112)

- 48) Write and explain Python code for reading n numbers and showing in sorted order.
- 49) Write Python code to check if a given year is a leap year or not.
- 50) Write Python Program to reverse a number and also find the Sum of digits in the reversed number. Prompt the user for input.
- 51) Write a program that prints the integers from 1 to 100. But for multiples of three print "Fizz" instead of the number, and for the multiples of five print "Buzz". For numbers which are multiples of both three and five print "FizzBuzz".
- 52) Write a Python Program to display the nature of roots of given quadratic equation using
nested if-else-elif.
- 53) Write a Python program to print the grade of the student based on the average marks. The grade ranges are: if average is greater than 80 then grade 'A', if average is 65 to 79 then grade 'B', if average is 50 to 64 then grade 'C' and if average is below 50 then grade 'D'
- 54) Write a python program to convert given binary number to decimal number
- 55) Write a program to repeatedly check for the largest number until the user enters "done".
- 56) Write a Python program using while loop first N numbers divisible by 5.
- 57) Write a python program to print the prime numbers in between 1 and n.
- 58) Write a Python script to create the list using following elements.
[4, 9, 15, 54, 82, 99, 110].
Also write script to insert 70 to the fifth position in the existing list.
- 59) Write Python code to determine whether the given string is a Palindrome or not using slicing.
- 60) Explain the following list methods with an example.
i. append() ii. extend() iii. insert()
- 61) Define a String and assign "SREENIDHI" write Python Script to output "EENI" and "IHD"!
- 62) Create a Dictionary in Python by taking keys as January to December with values of 1 to 12, access keys, values and items with separate statements?

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Exercise Programs – List -2 (48 to 112)

- 63)Create a list of students and output top three members in the list based on Marks.
- 64)Write a Python Program to test a given string is Palindrome or not.
- 65)Write a Python program to read a word and print the number of letters, vowels and percentage of vowels in the given word using dictionary.
- 66)Write a function which receives a variable number of strings as arguments. Find unique characters in each string.
- 67)Write a python recursive function that computes the sum of elements in a list of lists recursively.
- Sample input: [[1,3], [4, 5, 6], 7, 8]
- Expected output: 29.
- 68)Write a Python program to find the substrings within a string using Regular expressions.
- 69)Write a python program to count the number of characters, words and lines in a given file.
- 70)Define module. How modules are used in Python? Write a Python code using Math Module to print absolute value, square root and cube of given number.
- 71)Write a function that asks for an integer and prints the square of it. Use a while loop with a try, except, else block to account for incorrect inputs.
- 72)Write a python program that reads book information such as book_name, book_author, year_of_publication, isbn number and display the stored information.
- 73)What is custom exception? Create a custom exception 'InvalidAge', which will be used to raised when a citizen applying for vote with the age less than 18 years?

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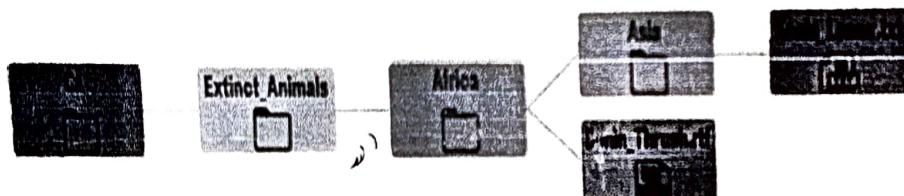
UNIT- 4

- 74) Fill in the Line class methods to accept coordinates as a pair of tuples and return the slope and distance of the line.
- 75) Create a list of students and output top three members in the list based on Marks
- 76) Write a Python Program to validate email(name@domain.com), mobile number(Consists exactly 10 digits), and username(Consists of 6 or more alphabets only) using Regular expressions.
- 77) Write a Python program to check whether the given email id and password are in given format or not using regular expressions.
Email id format: username@domain.com, where username can consist of alpha numeric characters, special symbols underscore and dot, maximum length 20 and first character should be an alphabet.
Password format: minimum length 8 characters consists alpha numeric characters and special symbols
- 78) Give an example to implement + operator overloading.
- 79) How to implement method overriding in Python? Explain
- 80) Write a Python class Rectangle constructed by a length and width and a method which will compute the area of a rectangle.
- 81) Write Python Program to Create a Class Called as Complex and Implement add () Method to Add Two Complex Numbers. Display the result by overloading the + Operator.
- 82) Create a bank account class that has two attributes: owner, balance and two methods: deposit, withdraw. As an added requirement, withdrawals may not exceed the available balance. Instantiate your class, make several deposits and withdrawals, and test to make sure the account can't be overdrawn.
- 83) Write a Python program to find the substrings within a string using Regular expressions.

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Exercise Programs – List -2 (48 to 112)

UNIT- 5

- 84)Develop a program to copy content of one file to another file, one character at a time.
- 85)Write a code to uploading a file.
- 86)Write a Python Script to create a file and then open the file in read mode and count the number of words in the given file.
- 87)Write a Python Program to copy contents of one file to a different file.
- 88)Consider the file structure given below. Write Python program to delete all the files and subdirectories from the Extinct_Animals Directory.



- 89)A binary file “STUDENT.DAT” has structure [admission_number, Name, Percentage]. Write a function countrec() in Python that would read contents of the file “STUDENT.DAT” and display the details of those students whose percentage is above 75. Also display number of students scoring above 75%.
- 90)Write a function VowelCount() in Python, which should read each character of a text file STORY.TXT, should count and display the occurrence of vowels (including small cases also)
- 91)Develop Python program to display content of file.
- 92)Write a Python program to check whether a file path is a file or a directory.

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Exercise Programs – List -2 (48 to 112)

UNIT- 6

- 93) How to apply font on Tkinter widgets? Give one example.**
 - 94) Create a window with button using Tkinter.**
 - 95) Explain the creation of different types of containers available in Tkinter? Elaborate the explanation with suitable example.**
 - 96) Describe how Button and Radio button is created in Tkinter with its syntax and example.**
 - 97) Write a Python script to demonstrate the usage of interact and interactive widgets?**
 - 98) Write a Python GUI program to add a button in your application using Tkinter module.**
 - 99) Write a Python Script to display Textbox, List with the usage of GUI modules?**
 - 100) Write a NumPy program to create a 5x5 array with random values and find the minimum and maximum values**
 - 101) Write a python program to display records of EMPLOYEE table EMPLOYEE having salary more than 1000.**
 - 102) Write a simple GUI program in Python to display a text**
 - 103) Elaborate importance of GUI Programming in Python? Write an application program to illustrate the same.**
 - 104) How will you Create a GUI using tkinter in python.**
 - 105) Write a Python GUI program of window size 100*200 that displays a button at x=20 and y=100 labeled as “Click Me”. Also add a function on that button that will create a message box having message “Thank you for Click”.**
 - 106) Write a Python program to store student details Sid, Name, Contact, Branch and DOB to the database.**
 - 107) How to create two radio button sets, one for gender and another for nationality on the same canvas.**
 - 108) Write a Python program to read the data from database table.**
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