Python Medium Level Questions

1. Create a list which contains numbers. .Now print the numbers in descending order without the duplicates

2. Find the maximum number in a list containing numbers without using the max method.

3.How can you count the occurrences of a specific character or substring in a string

4. Given an list of strings and a separator, split each word by separator. *Print list of strings after the splits,* excluding empty strings.

Eg. words = ["one..two.three", ".four.five.", "six.."]
separator = "."

5.Write a Python program that takes a sentence as input and counts the occurrences of each word using a dictionary.

6.Write a Python program that takes a list of words as input and uses a for loop to create a new list containing only the words that have more than 5 letters. Print the new list.

7.Write a Python program that asks the user for a number n and then uses a for loop to print the multiplication table of n from 1 to 10.

8.Write a Python program that takes a sentence as input and uses a for loop to count the number of words in the sentence without using the split() method.

9.Write a Python program that takes a list of mixed data types (integers, floats, strings, and booleans) as input. Append only the numeric values (integers and floats) in a new list and print it.

10.Write a Python program that asks the user to enter a number.If its an integer, print its square.If its a non-numeric value, catch the exception and display an error message.In the finally block, print a message saying "Execution completed**."**

11. Create a class Employee with attributes name and salary, and a method display_info() that prints the details. Then, create a subclass Manager that inherits from Employee and adds an attribute department. Override the display_info() method to include department details. Instantiate objects of both classes and call their display_info() methods.

12. Create a Student class with a private attribute _grade. Implement methods set_grade(grade) to modify the grade and get_grade() to retrieve it. Ensure that the grade can only be changed using the set_grade() method and cannot be accessed directly from outside the class.

13.Create a MathOperations class with a method add() that can take either two or three numbers as arguments and return their sum.Use default arguments or *args to implement this behavior.

14.Create a Shape class with a method area() that prints "Area calculation not defined". Then, create two subclasses Rectangle and Circle that override the area() method to calculate and return their respective areas. Instantiate both classes and call their area() methods.

15. Create two classes: Vehicle with an attribute max_speed and a method display_speed(), and Engine with an attribute horsepower and a method display_power(). Then, create a class Car that inherits from both Vehicle and Engine. Instantiate a Car object and call both inherited methods.

Additional Questions.

16.Write a program to print the reverse of a number in a list
Eg: [4563,9412,9432,1254]

17 Write a Python program that takes a string containing both letters and digits, extracts the digits, and prints them as a single number.

18. Write a program to reverse a number Eg; -721 output: -127