Python Practice Tasks (Basic to OOPs & File Handling)

# Basic Python Tasks

* 1. Print 'Hello, World!'
* 2. Take user input and print it
* 3. Add two numbers entered by the user
* 4. Swap two variables
* 5. Check if a number is even or odd
* 6. Find the largest of three numbers
* 7. Use a loop to print numbers 1 to 10
* 8. Print multiplication table of a number
* 9. Calculate the factorial of a number using loop
* 10. Check if a string is a palindrome

# Intermediate Python Tasks

* 11. Create a list and print all its elements
* 12. Append, insert and remove elements from a list
* 13. Use list comprehension to create a new list
* 14. Use a dictionary to store student names and marks
* 15. Write a function to count vowels in a string
* 16. Use a set to remove duplicates from a list
* 17. Sort a list of numbers in ascending and descending order
* 18. Create and use a tuple
* 19. Use try-except for exception handling
* 20. Write a function to find the square of a number

# Functions and Modules

* 21. Define a function to return the sum of two numbers
* 22. Create a function with default arguments
* 23. Write a function that takes variable number of arguments
* 24. Import a built-in module and use its functions (e.g. math, random)
* 25. Create your own module and import it into another file
* 26. Use lambda functions for simple calculations
* 27. Create a recursive function to calculate factorial
* 28. Create a simple calculator using functions
* 29. Write a function that checks if a number is prime
* 30. Create a module for string operations and use it

# Object-Oriented Programming (OOPs)

* 31. Create a class with attributes and methods
* 32. Create an object and access its methods and attributes
* 33. Use \_\_init\_\_ method for initialization
* 34. Use inheritance to create child and parent classes
* 35. Override a method in the child class
* 36. Use super() to access parent methods
* 37. Use class and static methods
* 38. Use private and public variables
* 39. Use property decorators
* 40. Create multiple objects of a class

# File Handling

* 41. Open and read a file
* 42. Open and write to a file
* 43. Append text to a file
* 44. Read a file line by line
* 45. Use 'with' statement to open a file
* 46. Count words in a file
* 47. Copy contents from one file to another
* 48. Create a file if it does not exist
* 49. Rename and delete a file
* 50. Work with JSON files (read/write)

# Mini Projects Ideas

* 1. Calculator App
* 2. To-Do List Manager
* 3. Contact Book using Dictionary
* 4. File Organizer
* 5. Quiz Game using OOP and file handling