Intermediate to Advanced Python

31. Check if two lists have any common element

32. Print Fibonacci series up to N terms

33. Check for balanced parentheses in a string

34. Find the first repeated word in a string

35. Custom implementation of split()

36. Sort dictionary by value and key

37. Find longest substring without repeating characters

38. Check if a number is a perfect square

39. Calculate power(x, y) without using pow

40. Flatten a nested list

41. Caesar cipher encode and decode

42. Implement a basic calculator with + - * /

43. String compression (aabcc -> a2b1c2)

44. Find peak element in a list

45. Longest common prefix among strings

46. Matrix transpose

47. Print spiral order matrix

48. Find duplicates in O(n) time and O(1) space

49. Generate Pascals Triangle

50. Create a CLI contact book

51. To-Do App: Add/View/Delete tasks

52. Chat App CLI: Add messages, view conversation

53. Library Management System basic version

54. Expense Tracker CLI

55. Student Gradebook

56. Resume Parser (parse name, email, skills)

57. Create a simple eCommerce cart system

58. Create a blog post structure using dicts/lists

59. User authentication mockup (username + password)

60. OTP generator and validator