These tools are practical, simple, and directly tied to real-world use cases that can be built using **Dictionaries**, **Recursive Functions**, **Tuples**, and **OS Module & File Handling**.

Dictionaries (Tools)	Recursive Functions (Tools)	Tuples (Tools)	OS Module & File Handling (Tools)
1. **Address Book** - Store contacts with names, phone numbers, and email addresses.	1. **Factorial Calculator** - Calculate factorial using recursion.	1. **Record Storage** - Use tuples to store a person's immutable data like name, age, etc.	1. **File Cleaner** - Remove unwanted files from a directory using OS module.
2. **Employee Database** - Store employee records with names, positions, and salaries.	2. **Fibonacci Sequence Generator** - Generate Fibonacci numbers recursively.	2. **Geographic Coordinates** - Use tuples to store coordinates (latitude, longitude).	2. **Log File Reader** - Read and filter log files by timestamp using the OS module.
3. **Student Grades Database** - Store students' names and their grades.	3. **Power of a Number** - Compute power of a number using recursion.	3. **Settings Configuration** - Use tuples to store application settings (e.g., resolutions, preferences).	3. **Directory Structure Viewer** - List all files and directories within a given directory.
4. **Shopping Cart** - Store items, prices, and quantities in a dictionary.	4. **Sum of Digits** - Calculate the sum of digits of a number recursively.	4. **Financial Record** - Store financial transactions as tuples (amount, date, description).	4. **File Renamer** - Rename files in a directory based on a pattern.
5. **Phone Book** - Store names and phone numbers with quick lookup.	5. **Greatest Common Divisor** - Find GCD using recursion.	5. **Immutable Data Storage** - Store metadata like creation date, version as a tuple.	5. **CSV Data Exporter** - Save data into CSV format using the OS module for file operations.
6. **Movie Database** - Store movie names, release dates, and ratings in a dictionary.	6. **Binary Search Algorithm** - Implement binary search using recursion.	6. **Task Scheduling** - Store task schedules (start time, end time) as tuples.	6. **File Searcher** - Search for specific files in a directory.
7. **Library Management System** - Store book titles, authors, and availability.	7. **Tower of Hanoi** - Solve the Tower of Hanoi puzzle recursively.	7. **API Response** - Store API response data in tuples for fast access and immutability.	7. **File Compressor** - Compress files in a folder using OS module functions.
8. **Dictionary-based Language Translator** - Store word translations in a dictionary.	8. **Power Set Generation** - Generate power sets of a set recursively.	8. **Configuration Data** - Store configuration settings (file paths, system preferences) as tuples.	8. **File Downloader** - Download and save files from the internet using OS and file handling operations.
9. **Weather App** - Store weather data for different cities using dictionaries.	9. **Merge Sort Algorithm** - Implement merge sort recursively.	9. **Game Scoreboard** - Store player scores as tuples in a leaderboard.	9. **File Permission Manager** - Change file permissions (read/write/execute) using OS module.
10. **Recipe Organizer** - Store ingredients and instructions for recipes.	10. **Binary Tree Traversal** - Perform binary tree traversal recursively.	10. **Sensor Data Logging** - Store sensor readings (temperature, humidity) as tuples.	10. **Backup System** - Create backups of specific files or directories to a backup location.
11. **Online Store Inventory** - Store product details (name, price, stock) in a dictionary.	11. **Quick Sort Algorithm** - Implement quick sort recursively.	11. **Player Stats** - Store player statistics (level, experience, points) in a tuple.	11. **Text File Editor** - Open, read, and edit text files using file handling.
12. **Country Info Database** - Store country names, populations, and capitals in a dictionary.	12. **Sum of List Elements** - Sum elements of a list recursively.	12. **Database Query Results** - Store results from database queries as tuples (row1, row2, ...).	12. **File Merger** - Combine multiple text files into one using file handling.
13. **Customer Database** - Store customer details (name, contact, purchase history) in a dictionary.	13. **Path Finding** - Solve pathfinding problems (e.g., shortest path) recursively.	13. **Date and Time Logs** - Store event timestamps in tuples for consistency.	13. **Text File Analyzer** - Analyze and extract data from text files.
14. **Product Review System** - Store user reviews with ratings for products.	14. **List Reversal** - Reverse a list using recursion.	14. **Student Information** - Store student data (name, ID, class) as tuples.	14. **Folder Cleanup** - Remove unnecessary files from a folder based on criteria.

Dictionaries (Tools)	Recursive Functions (Tools)	Tuples (Tools)	OS Module & File Handling (Tools)
15. **Inventory System** - Track products with stock quantities in a dictionary.	15. **String Permutations** - Generate all permutations of a string recursively.	15. **Coordinates Logging** - Store a sequence of GPS coordinates in tuples.	15. **Text File Splitter** - Split a large text file into smaller files.
16. **Bank Account System** - Store account details (account number, balance, transactions) in a dictionary.	16. **Find Factorial in List** - Find factorial of numbers in a list recursively.	16. **Game Levels** - Store different levels of a game (level number, points required) in tuples.	16. **File Mover** - Move files from one directory to another based on conditions.
17. **Address and Zip Code Database** - Store addresses with corresponding zip codes.	17. **String Length Calculation** - Calculate the length of a string recursively.	17. **Audit Logs** - Store audit logs (user actions, timestamps) as tuples.	17. **File Splitter** - Split large files into smaller parts for easier sharing.
18. **Library Catalog** - Store book titles, authors, and availability in a dictionary.	18. **Binary Search Tree** - Implement a binary search tree recursively.	18. **Course Schedule** - Store course details (course name, days, time) in tuples.	18. **Directory Permissions** - Modify directory permissions using OS module.
19. **Task Management System** - Store tasks with deadlines and priorities.	19. **File Directory Size** - Calculate directory size recursively.	19. **Player Inventory** - Store items in an inventory using tuples (item, quantity).	19. **System Monitor** - Monitor system resources (CPU, memory) and log them into a file.
20. **Personal Finance Tracker** - Track income and expenses in a dictionary.	20. **Depth-First Search** - Implement depth-first search on a graph recursively.	20. **Transaction History** - Store transaction details (amount, date, type) in tuples.	20. **Data Backup Utility** - Backup data files periodically using file handling and OS module.

Explanation:

1. **Dictionaries**: Tools include managing key-value pairs to store structured data like **inventory systems, customer databases, and movie databases**.
2. **Recursive Functions**: Tools that involve solving problems such as **factorial calculations, file searches, and pathfinding** using recursion.
3. **Tuples**: Tuples are ideal for storing **immutable data** like **coordinates, player stats, and database results**, ensuring consistency and efficiency.
4. **OS Module & File Handling**: Tools related to **file and directory management**, such as **file cleanup, renaming, merging, and backup systems**, using the **OS module and file operations**.