

# LeetCode刷题分类手册

**这是一本指导初学者刷题，并给出刷题顺序和分类的手册。**

LeetCode是我们每个CS人都不得不面对的一道坎。但目前1400道LeetCode题足以“劝退”每一个想要在北美找工转码的同学。在盲目开始之前，我们应该先思考如下几个问题：

## 刷多少题才够？

把一千多题从头到尾刷完，对大多数人来说，是不现实也不值得提倡的，LeetCode题库相似题型很多，刷题重在总结而不仅仅是数量，所以先给结论：

**刷400道高频题完全足够。**

## 要怎么刷才快？

接上面。400道题是否意味着从第1题刷到第400题呢，而高频题又是怎么定义的呢？

——这就是这本手册存在的意义。

一言以蔽之，刷题最重要的是要按分类刷，是要刷高频题，是要得出最优解，也要有高效率的重复和高质量的总结。基于此，我们把LeetCode做了一个分类：

1. 400题是我们从LeetCode1-1000题里挑选出来的高频（面试常出现）或有代表性（代表一整类题型）的题目。
2. 对上述400题，本手册以tag为依据分大类，再以题型为依据分小类、旨在提供科学、高效的刷题顺序。

## 关于我们

如果有同学想看到这些高频题的最优解讲解视频，请到[www.flageek996.com](http://www.flageek996.com)购买后观看。

如果觉得直接上手LeetCode吃力，我们有算法专题课程（CS301A和CS301B）作为过渡；如果某一块知识点是短板，那么专题系列课程（CS202/CS203/CS204/CS205）就是你的选择；对于刷题已经过关的同学，简历修改服务（CS105）和模拟面试服务（CS502）也值得尝试。

这本刷题手册的内容会持续更新，题目也会不断补充。所有信息会统一在公众号和小助手朋友圈发布，欢迎大家围观：

小助手微信：flageek996

公众号：FLAGeek频道



小助手微信



微信公众号

# String

| CS301B Chapter 2 |  |
|------------------|--|
| 14               | Longest Common prefix                                  |
| 58               | Length Of Last Word                                    |
| 387              | First Unique Character in a String                     |
| 383              | Ransom Note  |
| 415              | Add Strings  |
| 205              | Isomorphic Strings                                     |
| 451              | Sort Characters By Frequency                           |
| 293              | Flip Game  |
| 294              | Flip Game  |
| 290              | Word Pattern   |
| 249              | Group Shifted Strings                                  |
| 161              | One Edit Distance                                      |
| 819              | Most Common Word                                       |
| 38               | Count and Say  |
| 771              | Jewels and Stones                                      |
| 316              | Remove Duplicate Letters                               |
| 168              | Excel Sheet Column Title                               |
| 171              | Excel Sheet Column Number                              |
| 13               | Roman to Integer                                       |
| 12               | Integer to Roman                                       |
| 246              | Strobogrammatic Number                                 |
| 247              | Strobogrammatic Number                                 |
| 248              | Strobogrammatic Number                                 |
| 157              | Read N Characters Given Read4                          |
| 539              | Minimum Time Difference                                |
| 556              | Next Greater Element                                   |
| 395              | Longest Substring with At Least K Repeating Characters |
| 419              | Battleships in a Board                                 |
| 1055             | Shortest Way to Form String                            |
| String类之翻转       |  |
| 344              | Reverse String   |
| 151              | Reverse Words in a String                              |
| 186              | Reverse Words in a String                              |
| 557              | Reverse Words in a String                              |
| 345              | Reverse Vowels of a String                             |

| CS301B Chapter 2 |  |
|------------------|--|
| 541              | Reverse String   |
| String类之回文类      |  |
| 125              | Valid Palindrome                                       |
| 266              | Palindrome Permutation                                 |
| 5                | Longest Palindromic Substring                          |
| 9                | Palindrome Number                                      |
| 516              | Longest Palindromic Subsequence                        |
| 647              | Palindromic Substrings                                 |
| 336              | Palindrome Pairs                                       |
| 680              | Valid Palindrome                                       |
| String类之子序列      |  |
| 392              | Is Subsequence   |
| 115              | Distinct Subsequences                                  |
| 334              | Increasing Triplet Subsequence                         |
| String类之括号类问题    |  |
| 20               | Valid Parentheses                                      |
| 32               | Longest Valid Parentheses                              |
| 301              | Remove Invalid Parentheses                             |
| 241              | Different Ways to Add Parentheses                      |
| String类之加密与解密    |  |
| 271              | Encode and Decode Strings                              |
| 443              | String Compression                                     |
| 535              | Encode and Decode TinyURL                              |
| 394              | Decode String  |
| 820              | Short Encoding of Words                                |
| String类之Anagrams |  |
| 242              | Valid Anagram  |
| 49               | Group Anagrams   |
| 438              | Find All Anagrams in a String                          |
| String类之子集类问题    |  |
| 28               | Implement strStr()                                     |
| 3                | Longest Substring Without Repeating Characters         |
| 340              | Longest Substring with At Most K Distinct Characters   |
| 395              | Longest Substring with At Least K Repeating Characters |
| 159              | Longest Substring with At Most Two Distinct Characters |
| 76               | Minimum Window Substring                               |

| CS301B Chapter 2 |                            |
|------------------|----------------------------|
| 巩固练习             |                            |
| 1004             | Max Consecutive Ones       |
| 811              | Subdomain Visit Count      |
| 761              | Special Binary String      |
| 981              | Time Based Key-Value Store |

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# Binary Search

| CS301B Chapter 1 |   |
|------------------|---|
| 704              | Binary Search                           |
| 278              | First Bad Version                       |
| 35               | Search Insert Position                  |
| 33               | Search in Rotated Sorted Array          |
| 81               | Search in Rotated Sorted Array          |
| 153              | Find Minimum in Rotated Sorted Array    |
| 154              | Find Minimum in Rotated Sorted Array    |
| 528              | Random Pick with Weight                 |
| 162              | Find Peak Element                       |
| 34               | Search for a Range                      |
| 349              | Intersection of Two Arrays              |
| 350              | Intersection of Two Arrays              |
| 410              | Split Array Largest Sum                 |
| 658              | Find K Closest Elements                 |
| 1060             | Missing Element in Sorted Array         |
| 1011             | Capacity To Ship Packages Within D Days |
| 315              | Count of Smaller Numbers After Self     |
| 875              | Koko Eating Bananas                     |

# LinkedList

| CS301A Chapter 3 & CS301B Chapter 3 |   |
|-------------------------------------|---|
| 876                                 | Middle of the Linked List                 |
| 2                                   | Add Two Numbers                           |
| 445                                 | Add Two Numbers                           |
| 21                                  | Merge Two Sorted Lists                    |
| 369                                 | Plus One Linked List                      |
| 160                                 | Intersection of Two Linked Lists          |
| 24                                  | Swap Nodes in Pairs                       |
| 328                                 | Odd Even Linked List                      |
| 206                                 | Reverse Linked List                       |
| 92                                  | Reverse Linked List                       |
| 141                                 | Linked List Cycle                         |
| 61                                  | Rotate List                               |
| 19                                  | Remove Nth Node from End of List          |
| 708                                 | Insert into a Sorted Circular Linked List |
| 234                                 | Palindrome Linked List                    |
| 138                                 | Copy List with Random Pointer             |
| 237                                 | Delete Node in a Linked List              |
| 86                                  | Partition List                            |
| 430                                 | Flatten a Multilevel Doubly Linked List   |
| 23                                  | Merge K Sorted Lists                      |
| 25                                  | Reverse Nodes in k-Group                  |

# Matrix

| 48  | Rotate Image                 |
|-----|------------------------------|
| 54  | Spiral Matrix                |
| 59  | Spiral Matrix                |
| 74  | Search a 2D Matrix           |
| 240 | Search a 2D Matrix           |
| 498 | Diagonal Traverse            |
| 311 | Sparse Matrix Multiplication |
| 79  | Word Search                  |
| 36  | Valid Sudoku                 |
| 37  | Sudoku Solver                |

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# Math

| 1    | Two sum                            |
|------|------------------------------------|
| 167  | Two Sum II - Input array is sorted |
| 15   | 3Sum                               |
| 16   | 3Sum Closest                       |
| 259  | 3Sum Smaller                       |
| 18   | 4Sum                               |
| 560  | Subarray Sum Equals K              |
| 525  | Contiguous Array                   |
| 523  | Continuous Subarray Sum            |
| 412  | Fizz Buzz                          |
| 7    | Reverse Integer                    |
| 165  | Compare Version Numbers            |
| 66   | Plus One                           |
| 8    | String to Integer (atoi)           |
| 258  | Add Digits                         |
| 67   | Add Binary                         |
| 43   | Multiply Strings                   |
| 29   | Divide Two Integers                |
| 69   | Sqrt(x)                            |
| 50   | Pow(x,n)                           |
| 204  | Count Primes                       |
| 836  | Rectangle Overlap                  |
| 414  | Third Maximum Number               |
| 593  | Valid Square                       |
| 892  | Surface Area of 3D Shapes          |
| 390  | Elimination Game                   |
| 628  | Maximum Product of Three Numbers   |
| 780  | Reaching Points                    |
| 829  | Consecutive Numbers Sum            |
| 991  | Broken Calculator                  |
| 1041 | Robot Bounded In Circle            |



# Array

| CS301A Chapter 2 |  |
|------------------|--|
| 27               | Remove Element                           |
| 26               | Remove Duplicate from Sorted Array       |
| 80               | Remove Duplicate from Sorted Array       |
| 316              | Remove Duplicate Letters                 |
| 442              | Find All Duplicates in an Array          |
| 448              | Find All Numbers Disappeared in an Array |
| 325              | Maximum Size Subarray Sum Equals k       |
| 581              | Shortest Unsorted Continuous Subarray    |
| 277              | Find the Celebrity                       |
| 189              | Rotate Array                             |
| 384              | Shuffle an Array                         |
| hard41           | First Missing Positive                   |
| 299              | Bulls and Cows                           |
| 845              | Longest Mountain in Array                |
| 134              | Gas Station                              |
| 118              | Pascal's Triangle                        |
| 119              | Pascal's Triangle                        |
| 169              | Majority Element                         |
| 229              | Majority Element                         |
| 274              | H-Index                                  |
| 275              | H-Index                                  |
| 243              | Shortest Word Distance                   |
| 244              | Shortest Word Distance                   |
| 245              | Shortest Word Distance                   |
| 217              | Contains Duplicate                       |
| 219              | Contains Duplicate                       |
| 220              | Contains Duplicate                       |
| 55               | Jump Game                                |
| 45               | Jump Game                                |
| 307              | Range Sum Query - Mutable                |
| 308              | Range Sum Query 2D - Mutable             |
| 121              | Best Time to Buy and Sell Stock          |
| 122              | Best Time to Buy and Sell Stock          |
| 123              | Best Time to Buy and Sell Stock          |
| 188              | Best Time to Buy and Sell Stock IV       |

| CS301A Chapter 2 |   |
|------------------|---|
| 309              | Best Time to Buy and Sell Stock with Cooldown |
| 11               | Container With Most Water                     |
| 42               | Trapping Rain Water                           |
| 334              | Increasing Triplet Subsequence                |
| 128              | Longest Consecutive Sequence                  |
| 287              | Find the Duplicate Number                     |
| 611              | Valid Triangle Number                         |
| 239              | Sliding Window Maximum                        |
| 295              | Find Median from Data Stream                  |
| 53               | Maximum Subarray                              |
| 325              | Maximum Size Subarray Sum Equals k            |
| 209              | Minimum Size Subarray Sum                     |
| 238              | Product of Array Except Self                  |
| 152              | Maximum Product Subarray                      |
| 228              | Summary Ranges                                |
| 巩固练习             |   |
| 532              | K-diff Pairs in an Array                      |
| 713              | Subarray Product Less Than K                  |
| 974              | Subarray Sums Divisible by K                  |
| 945              | Minimum Increment to Make Array Unique        |
| 406              | Queue Reconstruction by Height                |
| 621              | Task Scheduler                                |
| 321              | Create Maximum Number                         |
| 403              | Frog Jump                                     |
| 289              | Game of Life                                  |
| 1029             | Two City Scheduling                           |
| 1052             | Grumpy Bookstore Owner                        |
| 755              | Pour Water                                    |
| 986              | Interval List Intersections                   |
| 953              | Verifying an Alien Dictionary                 |
| 939              | Minimum Area Rectangle                        |
| 733              | Flood Fill                                    |
| 697              | Degree of an Array                            |
| 723              | Candy Crush                                   |
| 957              | Prison Cells After N Days                     |
| 1031             | Maximum Sum of Two Non-Overlapping Subarrays  |
| 1007             | Minimum Domino Rotations For Equal Row        |

| CS301A Chapter 2 |   |
|------------------|---|
| 1167             | Minimum Cost to Connect Sticks                      |
| 1010             | Pairs of Songs With Total Durations Divisible by 60 |
| 4                | Median of Two Sorted Arrays                         |
| Array类之Interval  |   |
| 56               | Merge Intervals                                     |
| 252              | Meeting Rooms                                       |
| 253              | Meeting Rooms                                       |
| 57               | Insert Interval                                     |
| Array类之Sort      |   |
| 88               | Merge Sorted Array                                  |
| 75               | Sort Colors   |
| 283              | Move Zeros  |
| 280              | Wiggle Sort   |
| 324              | Wiggle Sort   |

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# Tree

| CS301A Chapter 6 & CS301B Chapter 9                 |  |
|---|--|
| 94  | Binary Tree Inorder Traversal                  |
| 95  | Unique Binary Search Trees                     |
| 144   | Binary Tree Preorder Traversal                 |
| 145   | Binary Tree Postorder Traversal                |
| 314   | Binary Tree Vertical Order Traversal           |
| 366   | Find Leaves of Binary Tree                     |
| 333   | Largest BST Subtree                            |
| Tree类之“人字形”（第一类）                                    |  |
| 104   | Maximum Depth of Binary Tree                   |
| 111   | Minimum Depth of Binary Tree                   |
| 543   | Diameter of Binary Tree                        |
| 572   | Subtree of Another Tree                        |
| 110   | Balanced Binary Tree                           |
| 250   | Count Univalued Subtrees                       |
| 124   | Binary Tree Maximum Path Sum                   |
| 235   | Lowest Common Ancestor of a Binary Search Tree |
| 236   | Lowest Common Ancestor of a Binary Tree        |
| 98  | Validate Binary Search Tree                    |
| 270   | Closest Binary Search Tree Value               |
| Tree类之“前缀路径问题”（第二类）                                 |  |
| 112   | Path Sum                                       |
| 113   | Path Sum                                       |
| 437   | Path Sum                                       |
| 129   | Sum Root to Leaf Numbers                       |
| 257   | Binary Tree Paths                              |
| 298   | Binary Tree Longest Consecutive Sequence       |
| Tree类之“BST中的Inorder, Successor, Predecessor问题”（第三类） |  |
| 285   | Inorder Successor in BST                       |
| 510   | Inorder Successor in BST                       |
| 272   | Closest Binary Search Tree Value               |
| 230   | Kth Smallest Element in a BST                  |
| 173   | Binary Search Tree Iterator                    |
| 450   | Delete a Node in a BST                         |
| 99  | Recover Binary Search Tree                     |
| 114   | Flatten Binary Tree to Linked List             |

| CS301A Chapter 6 & CS301B Chapter 9 |  |
|-------------------------------------|--|
| Tree类之“序列化Serialization”（第四类）       |  |
| 105                                 | Construct Binary Tree from Preorder and Inorder Traversal  |
| 106                                 | Construct Binary Tree from Inorder and Postorder Traversal |
| 538                                 | Convert BST to Greater Tree                                |
| 108                                 | Convert Sorted Array to Binary Search Tree                 |
| 109                                 | Convert Sorted List to Binary Search Tree                  |
| 297                                 | Serialize and Deserialize Binary Tree                      |
| Tree类之“去序列化Deserialization”（第五类）    |  |
| 449                                 | Serialize and Deserialize Binary Search Tree               |
| 428                                 | Serialize and Deserialize N-ary Tree                       |
| Tree类之“Level Order”（第六类）            |  |
| 107                                 | Binary Tree Level Order Traversal                          |
| 103                                 | Binary Tree Zigzag Level Order Traversal                   |
| 199                                 | Binary Tree Right Side View                                |
| 222                                 | Count Complete Tree Nodes                                  |
| 102                                 | Binary Tree Level Order Traversal                          |
| 巩固练习                                |  |
| 100                                 | Same Tree  |
| 101                                 | Symmetric Tree   |
| 226                                 | Invert Binary Tree   |
| 255                                 | Verify Preorder Sequence in Binary Search Tree             |
| 116                                 | Populating Next Right Pointers in Each Node                |
| 117                                 | Populating Next Right Pointers in Each Node                |
| 426                                 | Convert Binary Search Tree to Sorted Doubly Linked List    |
| 958                                 | Check Completeness of a Binary Tree                        |
| 637                                 | Average of Levels in Binary Tree                           |
| 96                                  | Unique Binary Search Trees                                 |
| 1130                                | Minimum Cost Tree From Leaf Values                         |
| 1110                                | Delete Nodes And Return Forest                             |
| 987                                 | Vertical Order Traversal of a Binary Tree                  |
| 545                                 | Boundary of Binary Tree                                    |
| 742                                 | Closest Leaf in a Binary Tree                              |
| 156                                 | Interleaving String  |

# DFS & BFS

| CS301B Chapter 5          |                              |
|---------------------------|------------------------------|
| DFS类之“0/1 DFS”（第一类）       |                              |
| 78                        | Subsets                      |
| 77                        | Combinations                 |
| 40                        | Combination Sum              |
| 216                       | Combination Sum              |
| DFS类之“多叉DFS”（第二类）         |                              |
| 39                        | Combination Sum              |
| 254                       | Factor Combinations          |
| 322                       | Coin Change                  |
| 90                        | Subsets                      |
| DFS类之“Selecting DFS”（第三类） |                              |
| 46                        | Permutations                 |
| 47                        | Permutations                 |
| 31                        | Next Permutation             |
| DFS类之“连通分量搜索”（第四类）        |                              |
| 200                       | Number of Islands            |
| 305                       | Number of Islands            |
| 286                       | Walls and Gates              |
| 130                       | Surrounded Regions           |
| 695                       | Max Area of Island           |
| 巩固练习                      |                              |
| 547                       | Friend Circles               |
| 529                       | Mine Sweeper                 |
| 306                       | Additive Number              |
| 337                       | House Robber                 |
| 425                       | Word Squares                 |
| 339                       | Nested List Weight Sum       |
| 341                       | Flatten Nested List Iterator |
| 364                       | Nested List Weight Sum       |
| 51                        | N-Queens                     |
| 79                        | Word Search                  |
| 140                       | Word Break                   |
| 131                       | Palindrome Partitioning      |
| 267                       | Palindrome Partitioning      |

| CS301B Chapter 5     |                                       |
|----------------------|---------------------------------------|
| 17                   | Letter Combinations of a Phone Number |
| 93                   | Restore IP Addresses                  |
| 694                  | Number of Distinct Islands            |
| 698                  | Partition to K Equal Sum Subsets      |
| 863                  | All Nodes Distance K in Binary Tree   |
| 721                  | Accounts Merge                        |
| 797                  | All Paths From Source to Target       |
| 1096                 | Brace Expansion                       |
| 329                  | Longest Increasing Path in a Matrix   |
| 351                  | Android Unlock Patterns               |
| 212                  | Word Search                           |
| BFS CS301B Chapter 5 |                                       |
| 785                  | Is Graph Bipartite?                   |
| 958                  | Check Completeness of a Binary Tree   |
| 127                  | Word Ladder                           |
| 126                  | Word Ladder                           |
| 210                  | Course Schedule                       |
| 490                  | The Maze                              |
| 784                  | Letter Case Permutation               |
| 417                  | Pacific Atlantic Water Flow           |
| 317                  | Shortest Distance from All Buildings  |
| 909                  | Snakes and Ladders                    |
| 994                  | Rotting Oranges                       |

# Stack

| CS301A Chapter 5 & CS301B Chapter 7 |  |
|-------------------------------------|--|
| 225                                 | Implement Stack using Queues             |
| 232                                 | Implement Queue using stacks             |
| 150                                 | Evaluate Reverse Polish Notation         |
| 155                                 | Min Stack                                |
| 716                                 | Max Stack                                |
| 636                                 | Exclusive Time of Functions              |
| 1047                                | Remove All Adjacent Duplicates in String |
| 402                                 | Remove K Digits                          |
| 71                                  | Simplify Path                            |
| 224                                 | Basic Calculator                         |
| 227                                 | Basic Calculator                         |
| 739                                 | Daily Temperatures                       |
| 735                                 | Asteroid Collision                       |
| 772                                 | Basic Calculator                         |

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# PriorityQueue

| CS301B Chapter 7 |   |
|------------------|---|
| 332              | Reconstruct Itinerary                   |
| 347              | Top K Frequent Elements                 |
| 692              | Top K Frequent Words                    |
| 973              | K Closest Points to Origin              |
| 373              | Find K Pairs with Smallest Sums         |
| 215              | Kth Largest Element in an Array         |
| 218              | The Skyline Problem                     |
| 414              | Third Maximum Number                    |
| 787              | Cheapest Flights Within K Stops         |
| 378              | Kth Smallest Element in a Sorted Matrix |
| 759              | Employee Free Time                      |

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# DP

| CS205 DP专题 |                                     |
|------------|-------------------------------------|
| 62         | Unique Paths                        |
| 63         | Unique Paths                        |
| 70         | Climbing Stairs                     |
| 120        | Triangle                            |
| 321        | Create Maximum Number               |
| 518        | Coin Change 2                       |
| 139        | Word Break                          |
| 279        | Perfect Squares                     |
| 64         | Minimum Path Sum                    |
| 256        | Paint House                         |
| 718        | Maximum Length of Repeated Subarray |
| 416        | Partition Equal Subset Sum          |
| 304        | Range Sum Query 2D - Immutable      |
| 486        | Predict the Winner                  |
| 312        | Burst Balloons                      |
| 72         | Edit Distance                       |
| 221        | Maximal Square                      |
| 85         | Maximal Rectangle                   |
| 276        | Paint Fence                         |
| 198        | House Robber                        |
| 213        | House Robber                        |
| 53         | Maximum Subarray                    |
| 152        | Maximum Product Subarray            |
| 1027       | Longest Arithmetic Sequence         |
| 1048       | Longest String Chain                |
| 10         | Regular Expression Matching         |
| 740        | Delete and Earn                     |
| 97         | Interleaving String                 |

# Bit Manipulation

| 421 | Maximum XOR of Two Numbers in an Array |
|-----|--|
| 89  | Gray Code                              |
| 190 | Reverse Bits                           |
| 191 | Number of 1 Bits                       |
| 201 | Bitwise AND of Numbers Range           |

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# Design

| 380  | Insert Delete GetRandom O(1)                      |
|------|---|
| 346  | Moving Average from Data Stream                   |
| 622  | Design Circular Queue                             |
| 641  | Design Circular Deque                             |
| 705  | Design HashSet                                    |
| 706  | Design HashMap                                    |
| 353  | Design Snake Game                                 |
| 348  | Design Tic-Tac-Toe                                |
| 362  | Design Hit Counter                                |
| 379  | Design Phone Directory                            |
| 381  | Insert Delete GetRandom O(1) - Duplicates Allowed |
| 359  | Logger Rate Limiter                               |
| 170  | Two Sum     - Data structure Design               |
| 207  | Course Schedule                                   |
| 208  | Implement Trie(Prefix Tree)                       |
| 211  | Add and Search Word - Data structure design       |
| 251  | Flatten 2D Vector                                 |
| 1188 | Design Bounded Blocking Queue                     |
| 472  | Concatenated Words 2                              |
| 1114 | Print in Order                                    |
| 146  | LRU Cache   |
| 460  | LFU Cache   |
| 642  | Design Search Autocomplete System                 |
| 281  | Zigzag Iterator                                   |
| 284  | Peeking Iterator                                  |
| 269  | Alien Dictionary                                  |

## Graph

| 785 | Is Graph Bipartite?                                   |
|-----|---|
| 323 | Number of Connected Components in an Undirected Graph |
| 261 | Graph Valid Tree                                      |
| 399 | Evaluate Division                                     |

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