



RELATÓRIO DE ANÁLISE

Tabela Hash



NOVEMBER 10, 2024

ATHON E EDUARDO

Engenharia de Software

Relatório de Análise das Tabelas Hash

Encademento Aberto com listas

Este documento apresenta o relatório de conclusão após a coleta de dados em tempo utilizando os as Tabelas Hash utilizando do Encademento Aberto com listas para resolver as colisões.

Após a implementação das tabelas hash, pudemos realizar a medição de tempo para a inserção, busca e contabilizar o número de colisões para cada posição e o número de colisões totais para cada uma das tabelas hash após a inserção dos nomes contidos no arquivo female_names.

Tamanho do arquivo: 5000 nomes.

Função Hash 1:

Total Colisões: 1284 | Tempo de Inserção: 18.72 ms | Tempo de Busca: 0.23 ms

Número de colisões para cada posição: [3: 1] [12: 2] [23: 1] [24: 1] [27: 1] [31: 2] [55: 1] [66: 1] [67: 1] [69: 1] [71: 1] [74: 1] [85: 1] [87: 2] [91: 2] [104: 1] [105: 1] [111: 2] [131: 1] [149: 1] [156: 1] [162: 1] [167: 2] [169: 1] [180: 1] [185: 1] [189: 1] [198: 2] [205: 1] [216: 2] [229: 2] [233: 1] [234: 1] [235: 1] [241: 1] [246: 1] [247: 1] [249: 1] [252: 1] [261: 1] [273: 1] [274: 1] [275: 2] [276: 1] [289: 1] [298: 1] [302: 1] [312: 1] [316: 1] [333: 1] [342: 1] [347: 1] [353: 1] [354: 1] [365: 1] [373: 1] [374: 2] [378: 1] [382: 1] [400: 1] [416: 1] [426: 1] [429: 1] [443: 2] [446: 2] [447: 1] [450: 1] [452: 1] [460: 1] [469: 1] [478: 1] [489: 1] [490: 2] [496: 2] [505: 2] [506: 1] [514: 2] [520: 1] [524: 1] [528: 2] [536: 1] [538: 1] [546: 2] [549: 1] [555: 1] [564: 1] [572: 1] [578: 1] [580: 2] [584: 1] [590: 1] [594: 1] [598: 1] [605: 1] [617: 1] [618: 1] [628: 4] [643: 1] [645: 1] [657: 2] [673: 1] [684: 3] [687: 1] [688: 1] [699: 1] [703: 1] [727: 1] [744: 1] [745: 1] [751: 1] [757: 2] [760: 3] [764: 1] [776: 1] [778: 1] [787: 1] [792: 1] [821: 1] [833: 1] [835: 1] [836: 1] [837: 1] [838: 1] [839: 1] [884: 3] [887: 1] [918: 1] [929: 1] [934: 1] [950: 1] [951: 1] [956: 1] [982: 3] [983: 1] [990: 1] [999: 1] [1000: 1] [1004: 1] [1021: 1] [1024: 1] [1025: 1] [1026: 1] [1029: 1] [1032: 1] [1035: 1] [1036: 1] [1039: 1] [1057: 1] [1064: 1] [1067: 1] [1094: 2] [1096: 1] [1109: 2] [1110: 2] [1114: 1] [1120: 1] [1126: 1] [1129: 2] [1144: 1] [1148: 1] [1153: 1] [1154: 1] [1161: 1] [1164: 1] [1169: 1] [1171: 1] [1192: 2] [1194: 1] [1196: 1] [1206: 1] [1214: 1] [1218: 1] [1221: 1] [1226: 2] [1252: 2] [1253: 1] [1261: 1] [1262: 2] [1264: 1] [1267: 1] [1273: 1] [1285: 2] [1291: 1] [1319: 1] [1325: 1] [1340: 1] [1341: 1] [1342: 1] [1354: 2] [1364: 3] [1367: 1] [1368: 1] [1371: 1] [1390: 1] [1392: 1] [1398: 1] [1405: 1] [1407: 1] [1416: 1] [1421: 1] [1445: 1] [1448: 2] [1454: 1] [1460: 1] [1462: 1] [1463: 1] [1469: 1] [1470: 1] [1506: 2] [1508: 1] [1509: 1] [1521: 1] [1524: 1] [1538: 1] [1540: 1] [1543: 1] [1552: 1] [1562: 2] [1578: 1] [1579: 1] [1587: 1] [1603: 2] [1610: 1] [1618: 1] [1621: 1] [1625: 1] [1654: 1] [1657: 1] [1660: 1] [1663: 2] [1673: 1] [1683: 1] [1695: 1] [1721: 1] [1734: 1] [1746: 1] [1771: 1] [1774: 1] [1779: 2] [1780: 1] [1787: 1] [1790: 1] [1792: 1] [1803: 1] [1805: 1] [1813: 1] [1820: 2] [1835: 2] [1840: 1] [1841: 1] [1844: 1] [1852: 1] [1865: 2] [1869: 1] [1879: 1] [1891: 1] [1896: 1] [1901: 1] [1902: 1] [1907: 1] [1928: 2] [1938: 1] [1943: 1] [1945: 1] [1952: 1] [1978: 1] [1981: 1] [1988: 1] [1996: 1] [1997: 1] [2007: 1] [2011: 1] [2017: 1] [2024: 1] [2025: 1] [2027: 2] [2034: 1] [2038: 1] [2045: 1] [2054: 2] [2060: 1] [2085: 1] [2093: 1] [2094: 1] [2096: 1] [2105: 1] [2111: 1] [2112: 1] [2117: 1] [2131: 1] [2140: 1] [2141: 1] [2142: 1] [2155: 1] [2158: 1] [2160: 1] [2162: 2] [2171: 2] [2175: 1] [2179: 1] [2199: 1] [2205: 1] [2208: 1] [2215: 3] [2240: 2] [2242: 3] [2246: 1] [2247: 1] [2248: 1] [2251: 1] [2263: 1] [2266: 1] [2267: 2] [2270: 1] [2272: 2] [2287: 1] [2292: 2] [2302: 1] [2311: 1] [2313: 2] [2315: 1] [2324: 1] [2327: 1] [2335: 1] [2340: 1] [2348: 1] [2365: 1] [2383: 1] [2394: 1] [2399: 2] [2417: 1] [2422: 1] [2429: 1] [2441: 2] [2442: 1] [2446: 1] [2453: 1] [2462: 1] [2463: 1] [2467: 1] [2473: 1] [2475: 1] [2477: 1] [2478: 1] [2483: 1] [2485: 2] [2502: 1] [2513: 1] [2517: 2] [2524: 1] [2527: 1] [2529: 2] [2532: 1] [2540: 1] [2543: 2] [2546: 1] [2555: 2] [2560: 1] [2570: 1] [2601: 1] [2604: 1] [2624: 1] [2629: 1] [2636: 1] [2640: 1] [2642: 1] [2646: 1] [2665: 1] [2668: 1] [2673: 1] [2682: 1] [2691: 1] [2701: 2] [2711: 1] [2715: 1] [2717: 1] [2720: 2] [2727: 2] [2746: 1] [2766: 1] [2770: 1] [2786: 2] [2807: 1] [2810: 1] [2811: 1] [2818: 1] [2823: 1] [2825: 2] [2830: 1] [2847: 1] [2850: 1] [2870: 1] [2871: 1] [2875: 1] [2879: 1] [2888: 1] [2904: 3] [2923: 2] [2925: 1] [2931: 1] [2943: 2] [2945: 1] [2950: 3] [2953: 1]

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Distribuição das chaves: [3: 2] [4: 1] [5: 1] [7: 1] [8: 1] [9: 1] [10: 1] [11: 1] [12: 3] [17: 1] [21: 1] [22: 1] [23: 2] [24: 2] [26: 1]

Função Hash 2:

Total Colisões: 1298 | Tempo de Inserção: 22.51 ms | Tempo de Busca: 0.02 ms

Número de colisões para cada posição: [16: 2] [23: 1] [30: 1] [33: 1] [34: 1] [37: 4] [41: 1] [46: 1] [49: 1] [62: 1] [67: 1] [78: 1] [89: 2] [96: 1] [97: 2] [133: 1] [136: 1] [139: 1] [143: 1] [144: 2] [150: 1] [152: 1] [153: 1] [161: 1] [163: 1] [179: 1] [190: 1] [192: 2] [218: 1] [232: 1] [237: 1] [250: 1] [256: 1] [260: 1] [265: 1] [269: 1] [272: 1] [276: 1] [296: 1] [300: 1] [314: 1] [317: 1] [321: 1] [360: 1] [362: 1] [363: 1] [402: 1] [407: 1] [410: 1] [411: 1] [434: 1] [435: 3] [453: 3] [464: 1] [465: 1] [482: 1] [484: 1] [489: 1] [502: 2] [515: 1] [517: 1] [524: 1] [526: 1] [534: 1] [538: 1] [542: 1] [545: 1] [556: 1] [566: 1] [575: 1] [576: 1] [579: 1] [586: 1] [600: 1] [601: 1] [604: 1] [615: 1] [623: 2] [624: 1] [630: 1] [652: 1] [653: 1] [657: 1] [674: 2] [679: 1] [686: 1] [688: 1] [705: 1] [707: 1] [708: 1] [714: 1] [725: 1] [730: 1] [732: 1] [738: 1] [744: 1] [750: 2] [752: 1] [753: 1] [754: 1] [756: 1] [780: 1] [781: 1] [783: 1] [784: 1] [795: 1] [797: 2] [803: 2] [804: 1] [818: 1] [835: 2] [838: 1] [845: 1] [846: 1] [853: 1] [854: 1] [855: 1] [869: 1] [870: 2] [881: 2] [884: 1] [890: 1] [895: 1] [898: 1] [901: 1] [912: 2] [917: 1] [924: 1] [926: 1] [928: 1] [932: 1] [940: 1] [958: 1] [968: 1] [970: 1] [987: 1] [989: 1] [997: 1] [1002: 1] [1005: 2] [1006: 1] [1008: 2] [1014: 1] [1020: 1] [1021: 2] [1043: 1] [1050: 1] [1071: 1] [1079: 1] [1083: 4] [1085: 1] [1094: 1] [1104: 1] [1116: 1] [1118: 1] [1130: 1] [1138: 1] [1142: 1] [1147: 1] [1148: 1] [1151: 1] [1152: 3] [1160: 1] [1167: 2] [1188: 1] [1192: 3] [1207: 2] [1231: 1] [1254: 2] [1259: 1] [1278: 1] [1287: 2] [1289: 1] [1292: 1] [1310: 1] [1314: 1] [1315: 1] [1320: 2] [1326: 1] [1338: 1] [1350: 1] [1352: 2] [1362: 1] [1377: 1] [1384: 2] [1387: 1] [1397: 1] [1408: 1] [1410: 1] [1412: 1] [1416: 1] [1418: 1] [1423: 2] [1424: 1] [1425: 1] [1451: 3] [1455: 2] [1477: 1] [1484: 1] [1487: 1] [1505: 1] [1525: 3] [1542: 1] [1545: 1] [1548: 2] [1605: 1] [1608: 1] [1620: 1] [1625: 1] [1629: 2] [1632: 1] [1644: 1] [1649: 2] [1659: 1] [1676: 1] [1680: 1] [1681: 1] [1682: 1] [1711: 2] [1712: 1] [1714: 1] [1745: 1] [1746: 1] [1755: 1] [1785: 1] [1786: 1] [1793: 1] [1810: 1] [1832: 1] [1851: 1] [1858: 1] [1861: 1] [1872: 1] [1885: 1] [1886: 1] [1893: 1] [1895: 3] [1898: 1] [1909: 2] [1910: 1] [1914: 1] [1918: 2] [1931: 1] [1934: 2] [1952: 1] [1958: 1] [1969: 2] [1974: 1] [1975: 1] [1980: 1] [1988: 1] [2000: 1] [2001: 1] [2005: 1] [2018: 1] [2019: 2] [2023: 1] [2044: 1] [2045: 2] [2050: 1] [2057: 1] [2058: 1] [2061: 1] [2066: 1] [2068: 1] [2074: 1] [2100: 1] [2102: 1] [2109: 2] [2113: 1] [2121: 1] [2123: 1] [2125: 1] [2126: 1] [2127: 2] [2142: 2] [2144: 1] [2146: 1] [2147: 2] [2154: 1] [2161: 1] [2162: 1] [2169: 1] [2182: 1] [2198: 1] [2199: 1] [2212: 1] [2214: 1] [2239: 1] [2242: 3] [2244: 1] [2245: 1] [2250: 1] [2251: 2]

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Comparativo de Eficiência:

Número de colisões: A **Função Hash 1** tem um desempenho melhor.

Tempo de Inserção: A **Função Hash 1** é a mais eficiente, tendo um tempo menor.

Tempo de Busca: A **Função Hash 2** é mais eficiente, tendo um tempo menor.

Distribuição das chaves: A **Função Hash 1** tem uma distribuição mais uniforme das chaves.