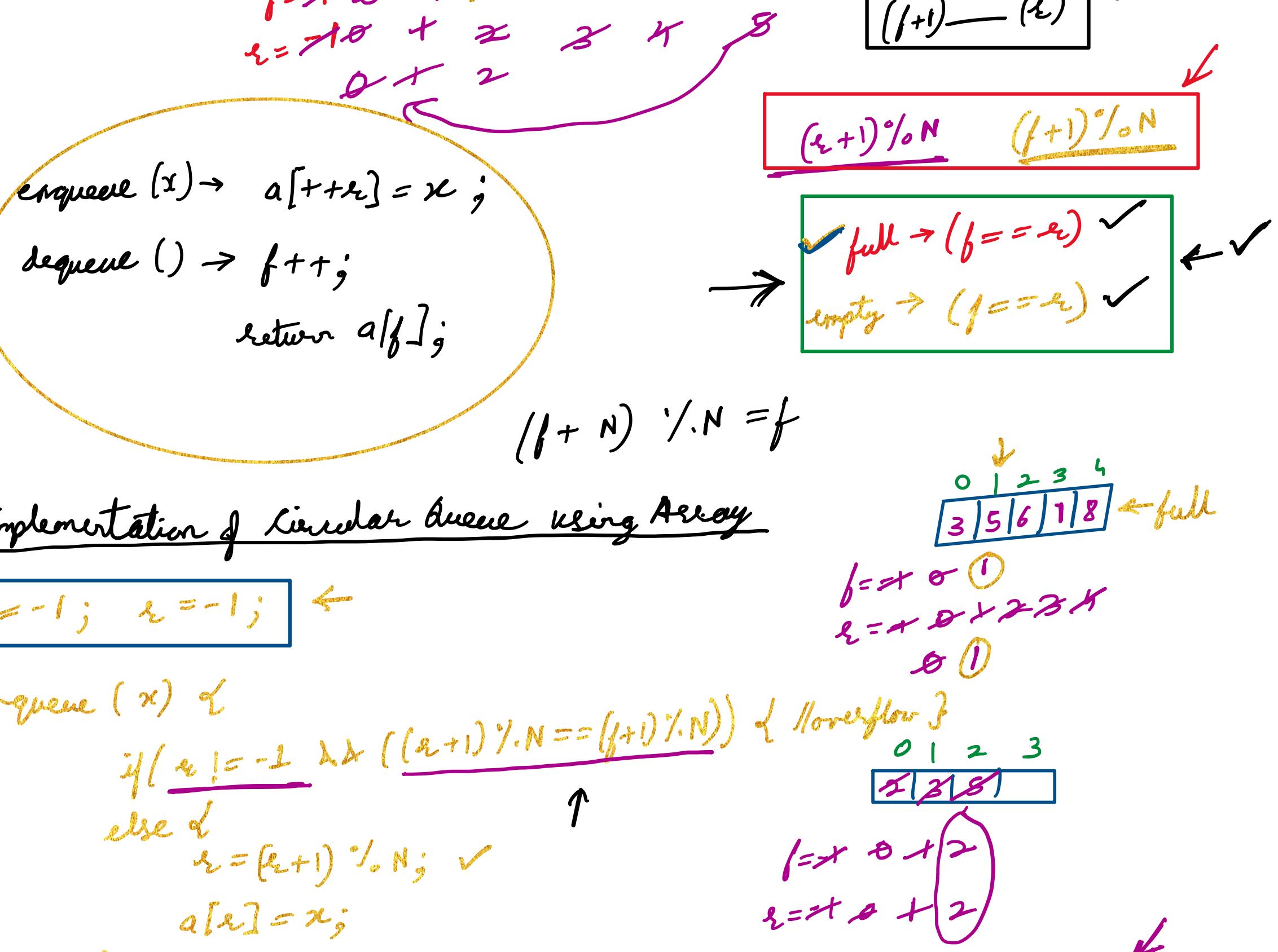


Linked List 4

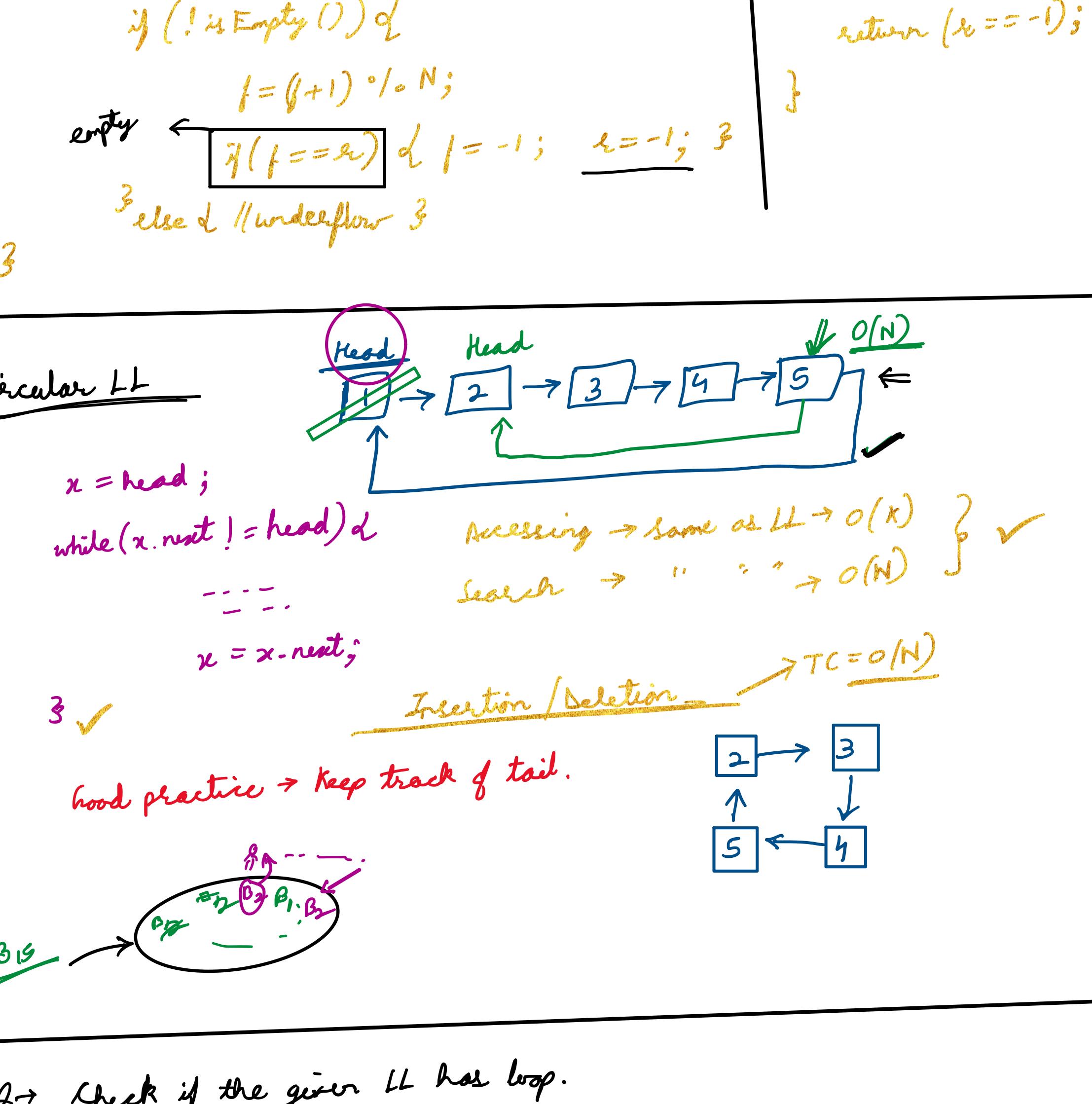
Saturday, 8 January 2022

9:04 PM

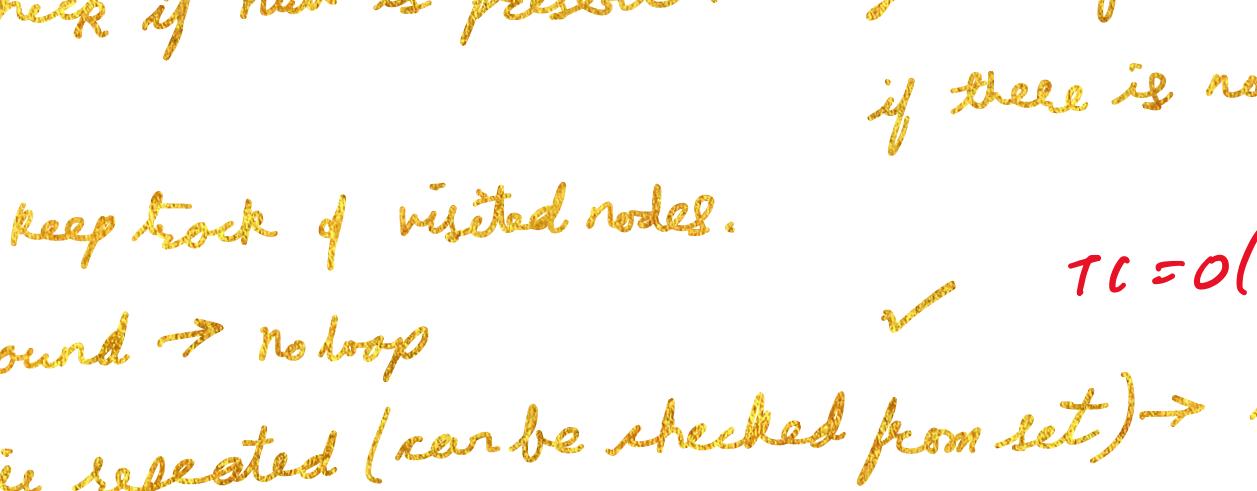
Circular Queues



Implementation of Circular Queue using Array



Circular LL



$x = \text{head};$

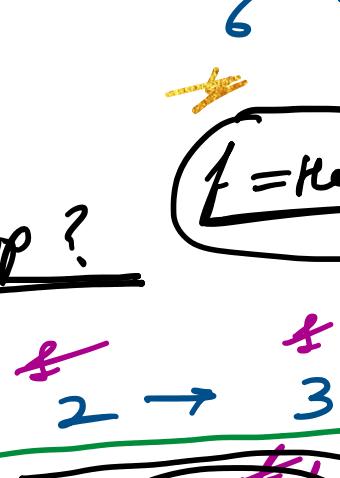
while ($x.\text{next} \neq \text{head}$) {

$x = x.\text{next};$

Accessing \rightarrow same as LL $\rightarrow O(1)$
Search \rightarrow " " $\rightarrow O(N)$

3 ✓

Good practice \rightarrow keep track of tail.



Q → Check if the given LL has loop.

I/P \rightarrow 1 → 2 → null

O/P \rightarrow No / o/False

I/P \rightarrow 1 → 2 → 3 → 4 → 5 → 6 → 7 → 8 → 9 → 10 → 11 → 12 → 13 → 14 → 15 → 16 → 17 → 18 → 19 → 20 → 21 → 22 → 23 → 24 → 25 → 26 → 27 → 28 → 29 → 30 → 31 → 32 → 33 → 34 → 35 → 36 → 37 → 38 → 39 → 40 → 41 → 42 → 43 → 44 → 45 → 46 → 47 → 48 → 49 → 50 → 51 → 52 → 53 → 54 → 55 → 56 → 57 → 58 → 59 → 60 → 61 → 62 → 63 → 64 → 65 → 66 → 67 → 68 → 69 → 70 → 71 → 72 → 73 → 74 → 75 → 76 → 77 → 78 → 79 → 80 → 81 → 82 → 83 → 84 → 85 → 86 → 87 → 88 → 89 → 90 → 91 → 92 → 93 → 94 → 95 → 96 → 97 → 98 → 99 → 100 → 101 → 102 → 103 → 104 → 105 → 106 → 107 → 108 → 109 → 110 → 111 → 112 → 113 → 114 → 115 → 116 → 117 → 118 → 119 → 120 → 121 → 122 → 123 → 124 → 125 → 126 → 127 → 128 → 129 → 130 → 131 → 132 → 133 → 134 → 135 → 136 → 137 → 138 → 139 → 140 → 141 → 142 → 143 → 144 → 145 → 146 → 147 → 148 → 149 → 150 → 151 → 152 → 153 → 154 → 155 → 156 → 157 → 158 → 159 → 160 → 161 → 162 → 163 → 164 → 165 → 166 → 167 → 168 → 169 → 170 → 171 → 172 → 173 → 174 → 175 → 176 → 177 → 178 → 179 → 180 → 181 → 182 → 183 → 184 → 185 → 186 → 187 → 188 → 189 → 190 → 191 → 192 → 193 → 194 → 195 → 196 → 197 → 198 → 199 → 200 → 201 → 202 → 203 → 204 → 205 → 206 → 207 → 208 → 209 → 210 → 211 → 212 → 213 → 214 → 215 → 216 → 217 → 218 → 219 → 220 → 221 → 222 → 223 → 224 → 225 → 226 → 227 → 228 → 229 → 230 → 231 → 232 → 233 → 234 → 235 → 236 → 237 → 238 → 239 → 240 → 241 → 242 → 243 → 244 → 245 → 246 → 247 → 248 → 249 → 250 → 251 → 252 → 253 → 254 → 255 → 256 → 257 → 258 → 259 → 260 → 261 → 262 → 263 → 264 → 265 → 266 → 267 → 268 → 269 → 270 → 271 → 272 → 273 → 274 → 275 → 276 → 277 → 278 → 279 → 280 → 281 → 282 → 283 → 284 → 285 → 286 → 287 → 288 → 289 → 290 → 291 → 292 → 293 → 294 → 295 → 296 → 297 → 298 → 299 → 300 → 301 → 302 → 303 → 304 → 305 → 306 → 307 → 308 → 309 → 310 → 311 → 312 → 313 → 314 → 315 → 316 → 317 → 318 → 319 → 320 → 321 → 322 → 323 → 324 → 325 → 326 → 327 → 328 → 329 → 330 → 331 → 332 → 333 → 334 → 335 → 336 → 337 → 338 → 339 → 340 → 341 → 342 → 343 → 344 → 345 → 346 → 347 → 348 → 349 → 350 → 351 → 352 → 353 → 354 → 355 → 356 → 357 → 358 → 359 → 360 → 361 → 362 → 363 → 364 → 365 → 366 → 367 → 368 → 369 → 370 → 371 → 372 → 373 → 374 → 375 → 376 → 377 → 378 → 379 → 380 → 381 → 382 → 383 → 384 → 385 → 386 → 387 → 388 → 389 → 390 → 391 → 392 → 393 → 394 → 395 → 396 → 397 → 398 → 399 → 400 → 401 → 402 → 403 → 404 → 405 → 406 → 407 → 408 → 409 → 410 → 411 → 412 → 413 → 414 → 415 → 416 → 417 → 418 → 419 → 420 → 421 → 422 → 423 → 424 → 425 → 426 → 427 → 428 → 429 → 430 → 431 → 432 → 433 → 434 → 435 → 436 → 437 → 438 → 439 → 440 → 441 → 442 → 443 → 444 → 445 → 446 → 447 → 448 → 449 → 450 → 451 → 452 → 453 → 454 → 455 → 456 → 457 → 458 → 459 → 460 → 461 → 462 → 463 → 464 → 465 → 466 → 467 → 468 → 469 → 470 → 471 → 472 → 473 → 474 → 475 → 476 → 477 → 478 → 479 → 480 → 481 → 482 → 483 → 484 → 485 → 486 → 487 → 488 → 489 → 490 → 491 → 492 → 493 → 494 → 495 → 496 → 497 → 498 → 499 → 500 → 501 → 502 → 503 → 504 → 505 → 506 → 507 → 508 → 509 → 510 → 511 → 512 → 513 → 514 → 515 → 516 → 517 → 518 → 519 → 520 → 521 → 522 → 523 → 524 → 525 → 526 → 527 → 528 → 529 → 530 → 531 → 532 → 533 → 534 → 535 → 536 → 537 → 538 → 539 → 540 → 541 → 542 → 543 → 544 → 545 → 546 → 547 → 548 → 549 → 550 → 551 → 552 → 553 → 554 → 555 → 556 → 557 → 558 → 559 → 560 → 561 → 562 → 563 → 564 → 565 → 566 → 567 → 568 → 569 → 570 → 571 → 572 → 573 → 574 → 575 → 576 → 577 → 578 → 579 → 580 → 581 → 582 → 583 → 584 → 585 → 586 → 587 → 588 → 589 → 590 → 591 → 592 → 593 → 594 → 595 → 596 → 597 → 598 → 599 → 600 → 601 → 602 → 603 → 604 → 605 → 606 → 607 → 608 → 609 → 610 → 611 → 612 → 613 → 614 → 615 → 616 → 617 → 618 → 619 → 620 → 621 → 622 → 623 → 624 → 625 → 626 → 627 → 628 → 629 → 630 → 631 → 632 → 633 → 634 → 635 → 636 → 637 → 638 → 639 → 640 → 641 → 642 → 643 → 644 → 645 → 646 → 647 → 648 → 649 → 650 → 651 → 652 → 653 → 654 → 655 → 656 → 657 → 658 → 659 → 660 → 661 → 662 → 663 → 664 → 665 → 666 → 667 → 668 → 669 → 670 → 671 → 672 → 673 → 674 → 675 → 676 → 677 → 678 → 679 → 680 → 681 → 682 → 683 → 684 → 685 → 686 → 687 → 688 → 689 → 690 → 691 → 692 → 693 → 694 → 695 → 696 → 697 → 698 → 699 → 700 → 701 → 702 → 703 → 704 → 705 → 706 → 707 → 708 → 709 → 710 → 711 → 712 → 713 → 714 → 715 → 716 → 717 → 718 → 719 → 720 → 721 → 722 → 723 → 724 → 725 → 726 → 727 → 728 → 729 → 730 → 731 → 732 → 733 → 734 → 735 → 736 → 737 → 738 → 739 → 740 → 741 → 742 → 743 → 744 → 745 → 746 → 747 → 748 → 749 → 750 → 751 → 752 → 753 → 754 → 755 → 756 → 757 → 758 → 759 → 760 → 761 → 762 → 763 → 764 → 765 → 766 → 767 → 768 → 769 → 770 → 771 → 772 → 773 → 774 → 775 → 776 → 777 → 778 → 779 → 780 → 781 → 782 → 783 → 784 → 785 → 786 → 787 → 788 → 789 → 790 → 791 → 792 → 793 → 794 → 795 → 796 → 797 → 798 → 799 → 800 → 801 → 802 → 803 → 804 → 805 → 806 → 807 → 808 → 809 → 8010 → 8011 → 8012 → 8013 → 8014 → 8015 → 8016 → 8017 → 8018 → 8019 → 8020 → 8021 → 8022 → 8023 → 8024 → 8025 → 8026 → 8027 → 8028 → 8029 → 8030 → 8031 → 8032 → 8033 → 8034 → 8035 → 8036 → 8037 → 8038 → 8039 → 8040 → 8041 → 8042 → 8043 → 8044 → 8045 → 8046 → 8047 → 8048 → 8049 → 8050 → 8051 → 8052 → 8053 → 8054 → 8055 → 8056 → 8057 → 8058 → 8059 → 8060 → 8061 → 8062 → 8063 → 8064 → 8065 → 8066 → 8067 → 8068 → 8069 → 8070 → 8071 → 8072 → 8073 → 8074 → 8075 → 8076 → 8077 → 8078 → 8079 → 8080 → 8081 → 8082 → 8083 → 8084 → 8085 → 8086 → 8087 → 8088 → 8089 → 8090 → 8091 → 8092 → 8093 → 8094 → 8095 → 8096 → 8097 → 8098 → 8099 → 80100 → 80101 → 80102 → 80103 → 80104 → 80105 → 80106 → 80107 → 80108 → 80109 → 80110 → 80111 → 80112 → 80113 → 80114 → 80115 → 80116 → 80117 → 80118 → 80119 → 80120 → 80121 → 80122 → 80123 → 80124 → 80125 → 80126 → 80127 → 80128 → 80129 → 80130 → 80131 → 80132 → 80133 → 80134 → 80135 → 80136 → 80137 → 80138 → 80139 → 80140 → 80141 → 80142 → 80143 → 80144 → 80145 → 80146 → 80147 → 80148 → 80149 → 80150 → 80151 → 80152 → 80153 → 80154 → 80155 → 80156 → 80157 → 80158 → 80159 → 80160 → 80161 → 80162 → 80163 → 80164 → 80165 → 80166 → 80167 → 80168 → 80169 → 80170 → 80171 → 80172 → 80173 → 80174 → 80175 → 80176 → 80177 → 80178 → 80179 → 80180 → 80181 → 80182 → 80183 → 80184 → 80185 → 80186 → 80187 → 80188 → 80189 → 80190 → 80191 → 80192 → 80193 → 80194 → 80195 → 80196 → 80197 → 80198 → 80199 → 80200 → 80201 → 80202 → 80203 → 80204 → 80205 → 80206 → 80207 → 80208 → 80209 → 80210 → 80211 → 80212 → 80213 → 80214 → 80215 → 80216 → 80217 → 80218 → 80219 → 80220 → 80221 → 80222 → 80223 → 80224 → 80225 → 80226 → 80227 → 80228 → 80229 → 80230 → 80231 → 80232 → 80233 → 80234 → 80235 → 80236 → 80237 → 80238 → 80239 → 80240 → 80241 → 80242 → 80243 → 80244 → 80245 → 80246 → 80247 → 80248 → 80249 → 80250 → 80251 → 80252 → 80253 → 80254 → 80255 → 80256 → 80257 → 80258 → 80259 → 80260 → 80261 → 80262 → 80263 → 80264 → 80265 → 80266 → 80267 → 80268 → 80269 → 80270 → 80271 → 80272 → 80273 → 80274 → 80275 → 80276 → 80277 → 80278 → 80279 → 80280 → 80281 → 80282 → 80283 → 80284 → 80285 → 80286 → 80287 → 80288 → 80289 → 80290 → 80291 → 80292 → 80293 → 80294 → 80295 → 80296 → 80297 → 80298 → 80299 → 80300 → 80301 → 80302 → 80303 → 80304 → 80305 → 80306 → 80307 → 80308 → 80309 → 80310 → 80311 → 80312 → 80313 → 80314 → 80315 → 80316 → 80317 → 80318 → 80319 → 80320 → 80321 → 80322 → 80323 → 80324 → 80325 → 80326 → 80327 → 80328 → 80329 → 80330 → 80331 → 80332 → 80333 → 80334 → 80335 → 80336 → 80337 → 80338 → 80339 → 80340 → 80341 → 80342 → 80343 → 80344 → 80345 → 80346 → 80347 → 80348 → 80349 → 80350 → 80351 → 80352 → 80353 → 80354 → 80355 → 80356 → 80357 → 80358 → 80359 → 80360 → 80361 → 80362 → 80363 → 80364 → 80365 → 80366 → 80367 → 80368 → 80369 → 80370