

# Topic wise revision

1. Compilation process
2. Tokens
  1. Keyword
  2. Identifiers
  3. Constant
  4. Operators
  5. Special symbols
3. Decision making
  1. Simple if
  2. If else
  3. If else ladder
  4. Nested if
  5. Switch case
4. Loops
  1. For
  2. While
  3. Do while
5. Jumping statements
  1. Goto
  2. Continue
  3. Break
6. Function
  1. Types of function
    1. Predefined function
    2. User - defined function
      1. Without argument without return
      2. With argument without return
      3. Without argument with return
      4. With argument with return
  2. Formal arguments and- actual arguments
  3. Call by value method
7. Array
  1. Types of array
    1. One dimension array (Vector)
    2. Two dimension array (Matrix)
    3. Multi dimension array

## 8. Strings

1. strcpy()
2. strlen()
3. strcmp()
4. strcat()
5. strstr()
6. strupr()
7. strlwr()

## 9. Pointer

1. Operator
  1. Reference operator
  2. De – reference operator
  3. Call by reference method
2. Pointer arithmetic
  1. (ptr++), (++ptr), (ptr--) and (--ptr)
  2. (ptr+i) and (ptr-i)
3. Pointer point different address
  1. Pointer to variable
  2. Pointer to array
  3. Pointer to string
  4. Pointer to function
  5. Pointer to structure
  6. Array of pointer
  7. Call back function
4. Types of pointer
  1. Void pointer
  2. Wild pointer
  3. NULL pointer
  4. Dangling pointer
  5. Pointer to pointer
  6. Constant pointer
  7. Far pointer
  8. Near pointer
  9. Huge pointer

## 10. Structure

1. Create a structure and structure variable
2. Nested structure
3. Structure Array
4. Structure passing to function (call by value and reference method)
5. Structure padding and packing
6. Bit - fields

11. Union
12. Enumeration
13. Memory allocation
  1. Static memory allocation
  2. Dynamic memory allocation
    1. Malloc()
    2. Calloc()
    3. Realloc()
    4. Free()
14. File handling
15. Little endian and big endian
16. Preprocessor directory
17. Header file
18. Command line and variable argument
19. Typedef
20. Typecasting

## Basic Interview Question in C

1. Write a program to check the user given number is palindrome or not
2. Write a program to print n number of Fibonacci Series
3. Write a program to print the factorial of given number
4. Write a program to check the user given number is Prime or not
5. Write a program to check the user given character is vowels and consonants
6. Write a program to convert the given decimal value to binary, octal, and hexadecimal value
7. Write a program to convert the given binary value to decimal, octal, and hexadecimal value
8. Write a program to check the user given number is Armstrong or not
9. Write a program to check the user given year is leap year or not
10. Write a program to find the Sum of array element using function (with argument with return & call by reference)
11. Write a program to Reverse the given array element using function (with argument without return & call by reference)
12. Write a program to Reverse the given array element using function (with argument without return & call by reference)
13. Write a program to find the min and max value in given array element using function (with argument with return & call by reference)
14. Write a program to Addition and multiplication of two matrix using function (with argument without return & call by reference)
15. Write a program to perform transpose of matrix
16. Write a program to Reverse the given string without using inbuilt function create user defined function(with argument without return & call by reference)
17. Write a program to copy the given string and store in new string variable without using inbuilt function create user defined function(with argument without return & call by reference)
18. Write a program to find length of the given string without using inbuilt function create user defined function(with argument with return & call by reference)
19. Write a program to compare the given strings are same or not without using inbuilt function create user defined function(with argument with return & call by reference)
20. Write a program to convert the given string to lower case without using inbuilt function create user defined function(with argument without return & call by reference)
21. Write a program to convert the given string to upper case without using inbuilt function create user defined function(with argument without return & call by reference)
22. Write a program to check the string is palindrome or not with using inbuilt function create user defined function(with argument without return & call by reference)
23. Write a program to check the string is palindrome or not without using inbuilt function create user defined function(with argument without return & call by reference)
24. Write a program to perform bit masking method using switch case (1. Setting a bit, 2. Clearing a bit, 3. Checking a bit, 4. Flipping a bit)
25. Write a program to print n number of Fibonacci series using recursion

26. Write a program to print Factorial of given number using recursion

## Advance Interview Questions

Strings:

1. Write a C program to convert uppercase to lowercase and vice versa
2. Write a C program to remove duplicate characters from string
3. Check if a string contains only digits
4. Check if a string contains only alphabets
5. Check if two strings are anagrams (An anagram is a word or phrase formed by rearranging the letters of another word or phrase, typically using all the original letters exactly once eg., Listen, Silent)
6. Write a program to Check if the given b\_string is substring of a\_string or not without using inbuilt function create user defined function(with argument with return & call by reference)
7. Write a string array and pass the array to function and print the array value

Bit Manipulation:

1. Write a C program to check if a particular bit is set or unset
2. Swap two numbers without using a temporary variable
3. Check if a number is even or odd without using modulus operator
4. Write a C program to count the number of set bit in a binary number
5. Check if two numbers have any common set bits
6. Write a C program to check if a number is a power of 2
7. Count the number of consecutive set bits in a binary number
8. Check if two number have exactly one common set bit
9. Write a C program to toggle all bits in a binary number.
10. Check if a binary number is a palindrome
11. Write a C program to find the longest sequence of set bits
12. Find the position of the leftmost and rightmost set bits in a binary number

Pointer:

1. Write a C program to find the maximum value in an array using pointer
2. Write a C program to count the number of vowels and consonants in a string using pointer
3. Write a C program to copy one string to another using pointer
4. Write a C program to allocate memory dynamically for integer array
5. Create a structure (struct stu) with (name, roll number, phone number) and assign the value in main function and pass the structure to user define function with call by reference method and access the value in function by (this operator (->))

For pointer focus lots in DSA (linked list, stack, queue, tree, and graph)

Array:

1. Find the repeated element in array
2. Remove the repeated element in the array
3. Get the array value to the user and store it, and get one more value and find the given value is present in the give array or not
4. Get the array value to the user and store it, and get one more value and find the number of occurrence of given value in array
5. Get the array value to the user and store it, and print the array value in ascending order
6. Get the array value to the user and store it, and print the array value in descending order

For array focus lots in searching and sorting methods

Searching methods:

1. Linear search
2. Binary search
3. Interpolation search
4. Hash table search
5. Depth – First Search(DFS)
6. Breath – First Search(BFS)

Sorting Techniques

1. Bubble sort
2. Insertion sort
3. Selection sort
4. Merge sort
5. Shell sort
6. Quick sort
7. Heap sort

## Pattern Questions in C

Star Pattern questions:

1. Right angled triangle
2. Inverted right angled triangle
3. Left angled triangle
4. Inverted left angled triangle
5. Pyramid pattern
6. Inverted pyramid pattern
7. Proper triangle
8. Inverted proper triangle
9. Diamond pattern
10. Hour – glass pattern
11. Hollow square pattern
12. Hollow diamond pattern

Number Patterns Question:

1. Pascal triangle
2. Diamond pattern with number
3. Hourglass pattern with number
- 4.

1 7 12 16 19 21

2 8 13 17 20

3 9 14 18

4 10 15

5 11

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