## **C** Codes

- 1. C Code to draw a certain shape.
- 2. C Code to Count Number of ones in the binary of an integer NB.
- 3. C Code to get the 5th root of a Number.
- 4. Tree methods to different Functions from one function.
- 5. Sorting C Code.
- 6. function to divide 2 numbers and not to Forget to handle The Case x/y and y=0.
- 7. C Code to search for a certain element in array.
- 8. write a function to write 1 or 0 to a certain bit in an integer NB.
- 9. function takes un-Sorted array contains Numbers from 0 to 9 The Function Shall return True if all NB. s exist and false if not.
- 10. Function To Swap Two NB and explain what happens exactly in memory.
- 11. Function to add two unsigned char NB.
- 12. C Code to pass arguments by reference.
- 13. Function takes un-Sorted array from 0 to 100 There is only one NB not repeated in the array Function Shall return This NB.
- 14. C Code to swap two arrays, swap two variables.
- 15. C Code to check if a certain NB is repeated in the array or not?
- 16. C Code to swap two arrays in reverse order.
- 17. C function to Check if string mirror or not.
- 18. Swap Two variables without using Temperature Variable or pointer.
- 19. Write C Code to start an array in descending order in a new array.
- 20. C Code to Count NB of Zeros in the binary of a NB.
- 21. C Function returns the maximum NB in array and its index.
- 22. Write a Function That receives an array and removes repeated elements.
- 23. Return The multiplication and Sum of Two Variables.
- 24. C function to reverse an array.
- 25. C function to get the repeated element in an array.
- 26. Draw X shape \* Pyramid Shape \*.
- 27. Function To Sort an array and There is input variable to decide the way of Sorting ascending or descending order.

- 28. C function takes an array and if it finds a NB (X) makes the previous element s in a separate array and The Function returns the new array.
- 29. C function to count the Maximum NB of Consecutive one's in 8- bit binary NB.
- 30. C Function to get the duplicated NB in an array.
- 31. C Function to get the maximum repeated element in array.
- 32. C Code to Pint 2D array.
- 33. C Code to swap 4 bits with the other 4 bits in a Byte.
- 34. C Code To reverse the 8 bits in Byte.
- 35. How To change data from little To Big endian.
- 36. C Code to Sort an array and put the result in a new array.
- 37. C function Takes an array of int and return number of Prime Numbers inside the array.
- 38. Swap Two Pointers of integers and Draw the Stack when i call The Function.
- 39. Swap elements of 2 Arrays according To The smallest array in size.
- 40. Write c code to copy The Contents of 2 arrays into a third one into a Zig Zag order given that array Sizes are not known.
- 41. C function to get maximum and minimum NB in an array.
- 42. C function that takes the Temperature of a certain moment and return the highest Temperature So far.
- 43. C function take one NB and Called by the APP many Times, return the minimum NB from the first Call.
- 44. C function to return the Prime NB Start from Zero to certain NB.
- 45. write a function That return the index of the odd element in the array given That the array Contains even NB. S except one odd NB.
- 46. Write C function to Print the maximum NB. S of Zeros between Two one's in binary of int NB.
- 47. C Code To print the binary of integer NB.
- 48. C Code to return the Sum of the digits of Certain NB.
- 49. Function to Swap Two arrays with different lengths.
- 50. Swap 3 digits Cyclic →ex. 235 will be 352.
- 51. C function to Count Two 8 bits Numbers and return the result.
- 52. C function to reverse a string (using iteration and recursion).
- 53. C Code to know if The Archi is little or big endian.
- 54. C function to handle error Checking of the sent data using Check Sum Algorithm.
- 55. C function to calculate the series 1,2,3,5, 8, ...

- 56. Function To Count the NB of Calls of This function.
- 57. C function to toggle a LED. (ADAS)
- 58. C function to toggle a specific bit in 8-bits variable. (HMI)
- 59. C code to control the led brightness using potentiometer. (ADAS)
- 60. C function to print array elements using pointer. (ADAS)
- 61. C function to copy an array of char (contains repeated numbers) to a new array excluding the repeated numbers using only one loop O(n). (ADAS)
- 62. C function to search for an element in array using binary search both iterative and recursive & mention time complexity. (ADAS)
- 63. C function returns the average of an array. (ADAS)
- 64. C function to count how many times it has been called in the system. (ADAS)
- 65. C function to remove the duplicated numbers in an array. (ADAS VLS)
- 66. C function to add two numbers, takes two unsigned char as arguments and returns the result in unsigned char and discuss where is the problem and how to solve it. (ADAS VaS)
- 67. C function to check if the number is prime or not. (ADAS HMI)
- 68. C function that takes a number. The function will be called many times in the application and it should return the maximum input number from the first call. (HMI)
- 69. C function that returns the sum of the digits of an integer number. Example: 1234, the function should return 1+2+3+4=10 (PTS)
- 70. C Function to compare between 2 arrays if they contain same elements or not. (VLS)
- 71. If you are given an array {1,2,5,7,1,1,3,1,7}, create a function that takes this array and an integer (like 1 in this case) and return it as follows: {2,5,7,3,7,1,1,1,1}. (VLS)
- 72. C function to return the circular shift of bits of a specific number. (PTS)
- 73. C function to clear a specific bit in an integer and another one to set a bit. (ADAS HMI)
- 74. C function that takes x and y, then returns their summation and multiplication by different ways (3ways). (HMI)
- 75. C function to merge 2 arrays using only one for loop. (VLS)
- 76. C function to find the missing element in an array in both cases (array is sorted?
- 77. C function to return the maximum number in array and the number of times this maximum number was found in the array. (ADAS)
- 78. C function to calculate the factorial using the recursive and iterative methods. (ADAS)
- 79. You have 100 consecutive bytes, The sum of the first 98 is in the last two bytes. Check if the sum is right or not. (PTS)

- 80. C function to count the number of occurrences of a certain number in array. (ADAS)
- 81. C function to convert from little to big endian. (PTS)
- 82. C function to print 2D array
- 83. C function to send a frame of 8 bytes and then send the sum of the data in the frame in 2 bytes, then write a function that will receive the frame and check if the data is received correctly. (PTS)
- 84. C function to sort an array using bubble sort algorithm. (HMI)
- 85. C function to sort an array using any algorithm. (VLS)
- 86. C function to search for a specific string in a stream of data. (HMI)
- 87. function that returns the cubic root of a given number. (ADAS)
- 88. C function to check if the number is a power of 2. (HMI)
- 89. C function to sort an array in ascending order. (HMI)
- 90. C function to search for a number and return its index ( if the number is not found, return the nearest element to it)
- 91. C function to print Fibonacci Series up to n terms
- 92. C function that returns 0 if a given number is a power of 3, otherwise return 1
- 93. C function to return the index of LAST occurrence of a number in a given array
- 94. C function to remove all characters in a string expect alphabet.
- 95. given int we want value of 4th LSB
- 96. given a string get last 2 letter "bat" return "t a"
- 97. C function to reverse string
- 98. check over flow 1116
- 99. Write a program that take two numbers and multiply them without using \* operation.
- 100. Write a program to calculate the power of a number. The number and its power are input from user.
- 101. Write a program that reads a positive integer and check if this number is a base of 2 like 1,2,4,8,16,32, 64...
- 102. Write a program that reads a positive integer and checks if it is a perfect square
- 103. -You are designing a poster which prints out numbers with a unique style applied to each of them. The styling is based on the number of closed paths or holes present in a giver number. The number of holes that each of the digits from 0 to 9 have are equal to the number of closed paths in the digit. Their values are:
  - 1, 2, 3, 5 and 7 = 0 holes.
  - 0, 4, 6, and 9 = 1 hole.
  - 8 = 2 holes.

Example if number 3824->3 has 0 holes,8 has 2 holes,4 has 1hole sum=0+2+1=3.

- 104. Write a C program to take a number and a character from user if the number is even print the same character, if the number is odd print the other case of the character (a->A, B->b).
- 105. Write c code to sum numbers from 1 to 100 (without loop).
- 106. Write full C functions to:
  - 1-Set bit.
  - 2-Clear bit
  - 3-Toggle bit.
  - 4-Read bit.
- 107. Write a C Function that takes one character and checks if it alphabet or not.
- 108. Write C Function that converts the any letter from lowercase to uppercase.
- 109. Given a positive integer z, check if z can be written as pq, where p and q are positive integers than 1, if z can be written as pq return 1 else return 0. Description:
  - A positive integer that needs to be determined if it can be expressed as a power of square number.
- 110. Write a C function that take two numbers and return array contain all numbers between the two given numbers. (Numbers 2,6->return array contains [3,4,5]).
- 111. Write a C function that return the count of the longest consecutive occurrence of a given number in an array.
  - Array=  $\{1,2,2,3,3,3,3,4,4,4,4,3,3,3\}$  and searching for 3 -> result = 4.
- 112. Write a C function that return the count of the longest consecutive occurrence of any number, and return the number Array=  $\{1,2,2,3,3,3,4,4,4,4,4,3,3,3\}$  result -> 5, number -> 4.
- 113. Write a function which, given a string, return TRUE if all characters are distinct and FALSE if any character is repeated.
- 114. Write a function that prints the frequency of a certain character in a string.
- 115. Write a function to remove all characters in a string expect alphabet.
- 116. Write a C function to find the frequency of characters in a string.
  - Input the string from the user.
  - Traverse the string, character by character and store the count of each of the characters in an array.
  - Print the array that contains the frequency of all the characters.
- 117. Write a function to reverse a string by passing it to a function.
- 118. Write a function to concatenate two strings.
- 119. C Program to read 10 integers into an array from user and print them in reversing order using pointers.
- 120. C Program to find length of a given string using pointer.
- 121. Array that contains integer values, some of these values are repeated with an even number of repetitions, and only one value is repeated with an odd number of repetitions. Write a C function that's take the array as input and the array size and return the number which has odd numbers of repetitions.

