

DAY 7 - (ARRAYS)

50. Input an array of size n and search an item from it. The item should be taken as input from the user and if found, the position at which it has been found in the array should be displayed, else, display "Sorry, item not found."
51. Input an array of n random numbers within 100 (to be generated using rand() function) and find the maximum and minimum among them.
52. Input n random numbers between 0 and 1 (using rand() function) and find their sum and average.
53. Input an array of n integer elements and find the second highest among them.
54. Input an array of n numbers and store the even numbers into an array even [] and odd numbers into an array odd []. Also display the count of even and odd numbers found.
55. Calculate the mean, median, mode, standard deviation & variance of an array of integers.
56. Input an array of n elements and an item from the user. Delete the occurrences of the element from the array. Display "Item not found" otherwise.
57. Print the Fibonacci series up to n using arrays.
58. Input a number and find its 1's complement.
59. Input a number and find its 2's complement.
60. Input a decimal number and convert it into its equivalent binary.
61. Input a decimal number and convert it into its equivalent octal.
62. Input a decimal number and convert it into its equivalent hexadecimal.
63. Input a binary number and convert it into its equivalent decimal.
64. Perform any base to any base conversion.
65. Input an array of n elements remove all duplicate elements and print the new array.
66. Input two arrays containing m and n elements each (m may or may not be equal to n) in sorted order and merge them into a third array in sorted order and display the merged array.
67. Input two arrays and find the resultant array after performing their –
(a) Intersection; (b) Union
68. Input an array of n elements in sorted order and perform binary search on it.

DAY 8 - (2-D ARRAYS)

71. Input a matrix of size (m x n) and find the sum of the even elements and odd elements separately.
72. Input a square matrix of any order and find the sum of the elements of the two diagonals separately.
73. Input a matrix of size (m x n), transpose it and print the final transposed matrix.
74. Input two matrices of any order and add them to produce a third matrix.
75. Input two matrices of any order and multiply them.
76. Input a matrix of size (m x n) and interchange two of its rows according to the choice of the user.
77. Input a matrix of size (m x n) and interchange two of its columns according to the choice of the user.
78. Input a matrix of size (m x n) and check whether it is a sparse matrix or not. A sparse matrix is a matrix where the number of zero elements is greater than the number of non-zero elements.
79. Input a matrix of size (m x n) and check if it is an identity matrix or not.
80. Generate a Magic square of order n.
81. Generate a Latin square of order n.
82. Generate a spiral matrix of order n.
83. Input a matrix and find its determinant.
84. Input a matrix and find its adjoint.

DAY 10 - (STRINGS)

91. Implement strlen(), strcat(), strrev(), strcpy(), strcmp(), strcmpi() without using standard library functions.
92. Enter a sentence and find number of vowels, consonants, spaces and special characters.
93. Input a string that contains digits as well as characters. Find the sum of the digits.
94. Input a string and find sum of the ASCII values of all characters.
95. Input a string and replace each character by the character two place ahead of it, for e.g., a by c, b by d, z by b
96. Input a word and print it vertically.
97. Input a string and check if it a palindrome or not.
98. Input a string and count the number of words in it.
99. Input a sentence and find the number of words starting with 'S'.
100. Input a string and count number of palindromic words present in it using an user defined function intpalin (char []) which returns 1 if the argument is palindrome.
101. Input a name and find its initial (e.g., Subhash Chandra Bose should be printed as S. C. B).
102. Input a name and find its initial (e.g., Subhash Chandra Bose should be printed as S. C. Bose).
103. Input a string and delete all consecutive occurrences of characters.
104. Input a string and a pattern and count the occurrences of the pattern in the string.
105. Input a string and a pattern and delete all occurrences of the pattern from the string.
106. Input a string and two patterns pattern1 and pattern2. Find all occurrences of pattern1 and replace them by pattern2.
107. Input n names and sort them in alphabetical order.
108. A Pig Latin word is a word that begins with consonant sound; all letters before the initial vowel are placed at the end of the word sequence. Then, "ay" is added, as in the following examples:
"pig" "igpay"
"banana" "ananabay"
"trash" "ashtray"
109. Input a word and generate its Pig Latin.
110. Find the frequency of occurrence of each character in a given string.