

Revision c codes

- 1- Write c function to take an integer number and calculate its square root.
- 2- Write c function to check Whether a Number is Prime or Not.
- 3- Write c function to take 2 numbers and print all prime numbers between them.
- 4- Write c function to take a number and get the nearest 10th number (number 73 return 70 ,number 78 return 80).
- 5- Write c function to take a number and sum all its digits (number 126 , sum = 1+2+6).
- 6- Write c function to reverse digits in number (number 2371 return 1732).
- 7- Write c function to check Whether the Number base is 2 or not (numbers like 1,2,4,8,16,32) try it in 4 different ways.
- 8- Write c function to count number of ones in the binary representation of a number (10-> 1010 return 2) try to optimize your code
- 9- Write c function to print the binary representation of a number try not to print zeros on the left (5-> 101).

10- Write c function to take number of lines and draw pattern with '*' like

The image displays four distinct patterns created using asterisks (*):

- Pattern 1 (Left):** A right-angled triangle with 5 rows. Row 1 has 5 stars, row 2 has 4, row 3 has 3, row 4 has 2, and row 5 has 1.
- Pattern 2 (Second from Left):** A diamond shape with 5 rows. Row 1 has 1 star, row 2 has 2, row 3 has 3, row 4 has 2, and row 5 has 1.
- Pattern 3 (Third from Left):** An 'X' shape with 5 rows. Row 1 has stars at positions 1 and 5, row 2 at 2 and 4, row 3 at 3, row 4 at 2 and 4, and row 5 at 1 and 5.
- Pattern 4 (Right):** A pyramid shape with 5 rows. Row 1 has 1 star, row 2 has 3, row 3 has 5, row 4 has 3, and row 5 has 1.

(try to draw a circle).

11- Write c function to sum numbers from 1 to 100 (without loop).

12- Write c function to calculate the factorial of number (factorial of 5 is $5*4*3*2*1$) try in 2 different way.

13- Write c function to find a number in a sorted array (try to optimize your code).

14- C function to return the maximum and minimum number in an array and there index (try 3 different way to return more than one variable from function).

15- Write c function to take 2 unsigned char and add them and return the result in unsigned char (where is the problem and how to solve it).

16- Write c function to take an array and reverse its elements.

17- Write c function to take 2 arrays and swap them (2 different size).

18- Write c function to take an array (with unknown size) contain 2 zeros swap the 3 element after the first zero with the 3 element after the second zero
(x,x,x,0,1,2,3,xxxx,0,5,6,7,xxxx ->swap 1,2,3with 5,6,7).

19- Write c function to take an string and return the longest word (My name is Mohamed Ali -> return Mohamed) .

20- Write c function to take an string and reverse words (My name is Mohamed Ali->Ali Mohamed is name my) try it without use external arrays.

21- Write c function to take an array and return the biggest difference between 2 numbers in the array (the smaller number must come first in the array)
{10,1,5,3,6,8,7,2}->return 7 difference between 1,8.

22- Write c function to count the max number of zeros between two ones in the binary representation of a number (296384->{ 1001000010111000000} return 4).

23- Write c function to find the most repeated number in an array of char (size of the array is very large) try to optimize your code .

24- Write c function to take 2 arrays and return an array by merging them like this
(arr1={1,2,3,4,5},arr2={11,12,13,14,15} return arr3={1,11,2,12,3,13,4,14,5,15}).

25- Write c function to reverse bits in a 8 bit number (149->10010101 return 169->10101001).