Function Related Problems

(Total 27 questions)

\$\frac{\sample input}{\sample input} \frac{\sample output}{\sample output} \fra	SL	Problem statement		Difficulty levels
Function to print an input character value. Sample input 3 Value received from main: 3 A Value received from main: A * Sample input Sample output 3 odd 8 even 4. Function to determine if a number is even or odd. * Sample input Sample output 3 odd 8 even * Sample input Sample output 3 respectively. Sample output 3 respectively. Function to determine if a number is positive, negative or zero. * Sample input Sample output 3 respectively. Sample output 3 respectively. Sample output 5 respectively. Sample output 5 respectively. Sample output 5 respectively. Sample output 5 respectively. Sample input Sample output 5 respectively.	1.	Function to print a custom message.		*
Function to print an input character value. Sample input 3 Value received from main: 3 A Value received from main: A * Sample input Sample output 3 odd 8 even 4. Function to determine if a number is even or odd. * Sample input Sample output 3 odd 8 even * Sample input Sample output 3 respectively. Sample output 3 respectively. Function to determine if a number is positive, negative or zero. * Sample input Sample output 3 respectively. Sample output 3 respectively. Sample output 5 respectively. Sample output 5 respectively. Sample output 5 respectively. Sample output 5 respectively. Sample input Sample output 5 respectively.		Sample input	Sample output	
Sample input 3				
Sample input 3				
3. Function to determine if a number is even or odd. Sample input 3 odd 8 even 4. Function to determine if a number is positive, negative or zero. * Sample input 3 positive -5 negative 0 zero 5. Function that takes two numbers as input and determines if the first number is greater than, equal to or less than the second number. Sample input 3 positive -5 sero 5. Function that takes two numbers as input and determines if the first number is greater than, equal to or less than the second number. Sample input 5 seroeter than 4 2 si si ess than 6	2.	Function to print an input cha	racter value.	*
3. Function to determine if a number is even or odd. Sample input Sample output 3 odd 8 even 4. Function to determine if a number is positive, negative or zero. * Sample input Sample output 3 positive or zero. * Sample input Sample output 3 positive or zero. * Sample input Sample output 3 positive or zero. * Sample input Sample output 3 positive or zero. * Sample input Sample output 3 positive or zero. * Sample input Sample output 3 positive or zero. 5. Function that takes two numbers as input and determines if the first number is greater than, equal to or less than the second number. Sample input Sample output 5 is greater than 4 2 is less than 6		Sample input	Sample output	
3. Function to determine if a number is even or odd. Sample input 3 odd 8 even 4. Function to determine if a number is positive, negative or zero. * Sample input 3 positive -5 negative 0 zero 5. Function that takes two numbers as input and determines if the first number is greater than, equal to or less than the second number. Sample input 5 is greater than 4 2 6 2 is less than 6				
Sample input Sample output 3 odd 8 even * 4. Function to determine if a number is positive, negative or zero. * Sample input Sample output 3 positive -5 negative 0 zero		Α	Value received from main: A	
Sample input Sample output 3 odd even 4. Function to determine if a number is positive, negative or zero. * Sample input Sample output 3 positive positive				
3 odd 8 even 4. Function to determine if a number is positive, negative or zero. * Sample input 3 positive -5 negative 0 zero 5. Function that takes two numbers as input and determines if the first number is greater than, equal to or less than the second number. \$ sample input 5 4	3.	Function to determine if a nur	mber is even or odd.	*
3 odd 8 even 4. Function to determine if a number is positive, negative or zero. * Sample input 3 positive -5 negative 0 zero 5. Function that takes two numbers as input and determines if the first number is greater than, equal to or less than the second number. \$ sample input 5 4				
3 odd 8 even 4. Function to determine if a number is positive, negative or zero. * Sample input 3 positive -5 negative 0 zero 5. Function that takes two numbers as input and determines if the first number is greater than, equal to or less than the second number. * Sample input 5 4 Si is greater than 4 2 6 2 is less than 6		Sample input	Sample output	
4. Function to determine if a number is positive, negative or zero. Sample input 3 positive -5 negative 0 zero 5. Function that takes two numbers as input and determines if the first number is greater than, equal to or less than the second number. Sample input 5 4 5 is greater than 4 2 6 2 is less than 6	ļ			
4. Function to determine if a number is positive, negative or zero. Sample input 3 positive -5 negative 0 zero 5. Function that takes two numbers as input and determines if the first number is greater than, equal to or less than the second number. Sample input 5 4 Si s greater than 4 2 6 2 is less than 6	l l			
3 positive -5 negative 0 zero 5. Function that takes two numbers as input and determines if the first number is greater than, equal to or less than the second number. Sample input Sample output 5 4 5 is greater than 4 2 6 2 is less than 6		8		
5. Function that takes two numbers as input and determines if the first number is greater than, equal to or less than the second number. Sample input 5 4 5 is greater than 4 2 6 2 is less than 6	4.		even	*
5. Function that takes two numbers as input and determines if the first number is greater than, equal to or less than the second number. Sample input 5 4 5 is greater than 4 2 6 2 is less than 6	4.	Function to determine if a nur	mber is positive, negative or zero.	*
5. Function that takes two numbers as input and determines if the first number is greater than, equal to or less than the second number. Sample input 5 4 5 is greater than 4 2 6 2 is less than 6	4.	Function to determine if a nur Sample input	mber is positive, negative or zero. Sample output	*
Sample input 5 4 5 is greater than 4 2 6 2 is less than 6	4.	Function to determine if a nur Sample input 3	mber is positive, negative or zero. Sample output positive	*
5 4 5 is greater than 4 2 is less than 6	4.	Function to determine if a nur Sample input 3 -5	mber is positive, negative or zero. Sample output positive negative	*
5 4 5 is greater than 4 2 is less than 6		Function to determine if a nur Sample input 3 -5 0 Function that takes two numb	even mber is positive, negative or zero. Sample output positive negative zero zero pers as input and determines if the first number is greater than,	
2 6 2 is less than 6		Function to determine if a num Sample input 3 -5 0 Function that takes two numbers equal to or less than the second	sample output positive negative negative zero ers as input and determines if the first number is greater than, and number.	
8 8 8 is equal to 8		Function to determine if a num Sample input 3 -5 0 Function that takes two numbers equal to or less than the second	sample output positive positive negative zero rers as input and determines if the first number is greater than, and number. Sample output Sample output	
100000000000000000000000000000000000000		Function to determine if a num Sample input 3 -5 0 Function that takes two numbers equal to or less than the second	sample output positive negative negative zero cers as input and determines if the first number is greater than, and number. Sample output 5 is greater than 4	

Function to calculate the sur		
Sample input	Sample output	
80 33 27	Sum In Function: 140	
	Sum In Main: 140	
100 -100	Sum In Function: 0	
	Sum In Main: 0	
Function to calculate the sur	m of n numbers coming from the console and stored in an array.	*
Sample input	Sample output	
3	Sum In Function: 140	
80 33 27	Sum In Main: 140	
2	Sum In Function: 0	
100 -100	Sum In Main: 0	
Sample input	of n integer numbers as input and prints them in reverse order. Sample output 284	
	Sample output 2 8 4 9 21 43 8 34 12 5	*
3 4 8 2 7 5 12 34 8 43 21 9 Function to calculate the fac	Sample output 2 8 4 9 21 43 8 34 12 5 torial of a number.	*
3 482 7 51234843219 Function to calculate the fac	Sample output 2 8 4 9 21 43 8 34 12 5 torial of a number. Sample output	*
3 4 8 2 7 5 12 34 8 43 21 9 Function to calculate the fac	Sample output 2 8 4 9 21 43 8 34 12 5 torial of a number.	*
3 482 7 51234843219 Function to calculate the face Sample input 3 5	Sample output 2 8 4 9 21 43 8 34 12 5 torial of a number. Sample output 6	*
3 482 7 51234843219 Function to calculate the face Sample input 3 5 Function to take two positive Sample input	Sample output 2 8 4 9 21 43 8 34 12 5 torial of a number. Sample output 6 120 e numbers x and y as input and calculate x to the power y. Sample output	
3 482 7 51234843219 Function to calculate the face Sample input 3 5	Sample output 2 8 4 9 21 43 8 34 12 5 storial of a number. Sample output 6 120 e numbers x and y as input and calculate x to the power y.	
3 482 7 51234843219 Function to calculate the face Sample input 3 5 Function to take two positive Sample input	Sample output 2 8 4 9 21 43 8 34 12 5 torial of a number. Sample output 6 120 e numbers x and y as input and calculate x to the power y. Sample output	

	Sample input	Sample output	7
	hello world	11	7
	I love my country	17	7
12.	Function to swap two numbers. (Restriction: Pass by value)		*
	Sample input	Sample output	7
	10 20	Value in func: 20 10	7
		Value in main: 10 20	_
13.	Function to swap two numbers. (Restriction: Pass by reference)		**
	Sample input	Sample output	7
	10 20	Value in func: 20 10	7
		Value in main: 20 10	
1/	Function to determine only even number	are in an array of input integers	*
14.	Function to determine only even number		*
14.	Sample input	Sample output	*
14.			*
14.	Sample input 24 77 117 -512 1024	Sample output 24 -512 1024 0 256	**
	Sample input	Sample output 24 -512 1024 0 256 imum value in an array.	
	Sample input 24 77 117 -512 1024 45 33 0 256 Function that finds and returns the mini Sample input	Sample output 24 -512 1024 0 256 imum value in an array. Sample output	
	Sample input	Sample output 24 -512 1024 0 256 imum value in an array.	
	Sample input 24 77 117 -512 1024 45 33 0 256	Sample output 24 -512 1024 0 256 imum value in an array. Sample output Minimum Value: -37 Minimum Value: 1	
15.	Sample input 24 77 117 -512 1024 45 33 0 256	Sample output 24 -512 1024 0 256 imum value in an array. Sample output Minimum Value: -37 Minimum Value: 1	**
15.	Sample input	Sample output 24 -512 1024 0 256 imum value in an array. Sample output Minimum Value: -37 Minimum Value: 1	**
15.	Sample input 24 77 117 -512 1024 45 33 0 256	Sample output 24 -512 1024 0 256 imum value in an array. Sample output Minimum Value: -37 Minimum Value: 1	**

7.	Function to sort and	return an input array in ascending order.	**
	Sample input	Sample output	
	10 22 -5 11		
. 8.	Function "IsPrime()"	" to determine whether a number is prime or not.	**
	Sample input	Sample output	
	1	Not prime	
	2	Prime	
	11	Prime	
	39	Not prime	
	101	Prime	
19.	1	Prime()" to compute the prime numbers less than N, where N is an input ime() uses IsPrime() to check whether a number is prime or not.	***
19.	integer. GeneratePr i	ime() uses IsPrime() to check whether a number is prime or not.	***
19.	1		***
19.	integer. GeneratePri	ime() uses IsPrime() to check whether a number is prime or not. Sample output	***
19.	integer. GeneratePri Sample input 5	Sample output Prime less than 5: 2, 3	***
	Sample input 5 10 40 Function "GenNthPo	Sample output Prime less than 5: 2, 3 Prime less than 10: 2, 3, 5, 7 Prime less than 17: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37 Prime ()" to compute the N th prime number, where N is an integer input.	***
	Sample input 5 10 40 Function "GenNthPotential Sample input	Sample output Prime less than 5: 2, 3 Prime less than 10: 2, 3, 5, 7 Prime less than 17: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37 Prime()" to compute the Nth prime number, where N is an integer input. Sample output	
	Sample input 5 10 40 Function "GenNthPoly Sample input 5	Sample output Prime less than 5: 2, 3 Prime less than 10: 2, 3, 5, 7 Prime less than 17: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37 Prime ()" to compute the N th prime number, where N is an integer input. Sample output 5th Prime: 11	
	Sample input 5 10 40 Function "GenNthPotential Sample input	Sample output Prime less than 5: 2, 3 Prime less than 10: 2, 3, 5, 7 Prime less than 17: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37 Prime()" to compute the Nth prime number, where N is an integer input. Sample output	
20.	Sample input 5 10 40 Function "GenNthPoly Sample input 5 10 40	Sample output Prime less than 5: 2, 3 Prime less than 10: 2, 3, 5, 7 Prime less than 17: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37 Prime ()" to compute the N th prime number, where N is an integer input. Sample output 5th Prime: 11 10th Prime: 29 40th Prime: 173	
20.	Sample input 5 10 40 Function "GenNthPoly Sample input 5 10 40	Sample output Prime less than 5: 2, 3 Prime less than 10: 2, 3, 5, 7 Prime less than 17: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37 Prime less than 17: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37 Prime()" to compute the Nth prime number, where N is an integer input. Sample output 5th Prime: 11 10th Prime: 29 40th Prime: 173	***
20.	Sample input 5 10 40 Function "GenNthPoly Sample input 5 10 40 Implement the follo	Sample output Prime less than 5: 2, 3 Prime less than 10: 2, 3, 5, 7 Prime less than 17: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37 Prime less than 17: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37 Prime()" to compute the Nth prime number, where N is an integer input. Sample output 5th Prime: 11 10th Prime: 29 40th Prime: 173	***

	Calc_Std_deviation(array, num_of_elem)			
	$\sqrt{\sum (x-M)^2}$			
	$\sigma = \sqrt{\frac{\sum (x - M)}{N}}$			
	Formula:			
	Sample input Sample output			
	4 5 5 4 4 2 2 6	1.32		
	600 470 170 430 300	147.32		
22.	_ ::	o string arrays (a , b) as parameters, returns 1 if string b	**	
	is found anywhere in string a , or retu	rns –1 if no match is found.		
	(Assuming, strlen(a)>strlen(b))			
	Comple input (c. h)	Samula autout		
	Sample input (a, b) madam adam	Sample output 1		
	telescope less	0		
	101010 101	1		
23.	_ ::	o string arrays (a, b) as parameters, uses function	***	
		str_length() to determine the lengths of the strings, and then looks for the smaller string		
	anywhere in the bigger string. It returns 1 if the substring is found, or returns –1 if no match is found			
	is found.	rns 1 if the substring is found, or returns –1 if no match		
	is found.			
	is found.			
	is found. [Restriction: str_length() cannot uses Sample input (a, b) madam adam	Sample output 1		
	is found. [Restriction: str_length() cannot uses Sample input (a, b) madam adam telescope less	Sample output 1 0		
	is found. [Restriction: str_length() cannot uses Sample input (a, b) madam adam	Sample output 1		
	is found. [Restriction: str_length() cannot uses Sample input (a, b) madam adam telescope less	Sample output 1 0		
24.	is found. [Restriction: str_length() cannot uses Sample input (a, b) madam adam telescope less 101010 101	Sample output 1 0 1	**	
24.	is found. [Restriction: str_length() cannot uses Sample input (a, b) madam adam telescope less 101010 101 Program that continuously takes two	Sample output 1 0	**	
24.	is found. [Restriction: str_length() cannot uses Sample input (a, b) madam adam telescope less 101010 101 Program that continuously takes two	Sample output 1 0 1 positive integers as inputs and uses two functions to sor) and LCM (least common multiple). Both functions	**	
24.	is found. [Restriction: str_length() cannot uses Sample input (a, b) madam adam telescope less 101010 101 Program that continuously takes two find their GCD (greatest common divitake parameters and returns desired	Sample output 1 0 1 positive integers as inputs and uses two functions to sor) and LCM (least common multiple). Both functions values.	**	
24.	is found. [Restriction: str_length() cannot uses Sample input (a, b) madam adam telescope less 101010 101 Program that continuously takes two find their GCD (greatest common divi	Sample output 1 0 1 positive integers as inputs and uses two functions to sor) and LCM (least common multiple). Both functions values.	**	
24.	Restriction: str_length() cannot uses	Sample output 1 0 1 positive integers as inputs and uses two functions to sor) and LCM (least common multiple). Both functions values. Sample output Sample output	**	
24.	is found. [Restriction: str_length() cannot uses Sample input (a, b) madam adam telescope less 101010 101 Program that continuously takes two find their GCD (greatest common divitake parameters and returns desired to the process input t	Sample output 1 0 1 positive integers as inputs and uses two functions to sor) and LCM (least common multiple). Both functions values. Sample output GCD: 1	**	
24.	Restriction: str_length() cannot uses	Sample output 1 0 1 positive integers as inputs and uses two functions to sor) and LCM (least common multiple). Both functions values. Sample output Sample output	**	

		LCM: 12	
	12 32	GCD: 4	
		LCM: 96	
25.	Program that implements function to perform	m operations on a 3X5 matrix:	***
		_	
		tMatrix()	
		vMatrix()	
	Scalar	:Multiply()	
	Sample input	Sample output	
	7 16 55 13 12	Original:	
	12 10 52 0 7	7 16 55 13 12	
	-2 1 2 4 9	12 10 52 0 7	
		-2 1 2 4 9	
	2		
		Multiplied by 2: 14 32 110 26 24	
		24 20 104 0 14	
		-4 2 4 8 18	
	7 16 55 13 12	Original:	
	12 10 52 0 7	7 16 55 13 12	
	-2 1 2 4 9	12 10 52 0 7	
		-2 1 2 4 9	
	-1		
		Multiplied by -1:	
		-14 -32 -110 -26 -24 -24 -20 -104 0 -14	
		4 -2 -4 -8 -18	
		4 2 4 0 10	
26.	Program that implements function to perform	n operations on a MXN matrix:	****
		40 A a 4 a 4 a 4 a 4	
		tMatrix()	
		vMatrix() ·Multiply()	
	Scalar	Telescopis ()	
			•

Sample input	Sample output
2 2	Original:
	7 16
7 16	12 10
12 10	
	Multiplied by 2:
2	14 32
	24 20
3 5	Original:
	7 16 55 13 12
7 16 55 13 12	12 10 52 0 7
12 10 52 0 7	-2 1 2 4 9
-2 1 2 4 9	
	Multiplied by -1:
-1	-14 -32 -110 -26 -24
	-24 -20 -104 0 -14
	4 -2 -4 -8 -18

- 27. Program to convert a positive integer to another base using the following functions-
 - I. Get_Number_And_Base (): Takes number to be converted (N) and base value (B) from user. Base must be between 2 and 16.
 - II. Convert_Number (): Does the conversion
 - III. Show_Converted_Number(): Displays the converted value.

Samp	ole input(N,B)	Sample output
100	8	144
512	16	200
512	0	Base not within proper range!
