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<i>Assignment No.</i>	<i>Assignment</i>	<i>Page No.</i>	<i>Date</i>	<i>Signature</i>
1	Write a C program that includes a user-defined function named isPrime with the signature int isPrime(int num) ; The function should take an integer as a parameter and return 1 if the number is prime and 0 otherwise.	1	20/11/2025	
2	Write a C program that includes a user-defined function named isArmstrong with the signature int isArmstrong(int num) ; An Armstrong number is a number that is equal to the sum of its own digits each raised to the power of the number of digits. For example, 153 is an Armstrong number because $1^3 + 5^3 + 3^3 = 153$	2	20/11/2025	
3	Write a C program that includes a user-defined function named isPerfect with the signature int isPerfect(int num) ; A perfect number is a positive integer that is equal to the sum of its proper divisors, excluding itself. For example, 28 is a perfect number because the sum of its divisors (1, 2, 4, 7, 14) equals 28.	4	21/11/2025	
4	Write a C program that takes an integer input representing a month (1 to 12) and a year. Use a switch statement to display the number of days in that month, considering leap years.	5	21/11/2025	
5	Write a C program that defines an array of integers, and includes a user-defined function named reverseArray with the signature void reverseArray(int arr[], int size) ; The function should reverse the elements of the array.	6	27/11/2025	
6	Write a C program that includes a user-defined function named findLargest with the signature int findLargest(int arr[], int size) ; The function should take an array of integers and its size, and return the largest element in the array.	8	27/11/2025	
7	Write a C program that includes a user-defined function named binarySearch with the signature int binarySearch(int arr[], int size, int target) ; The function should perform a binary search on a sorted array of integers and return the index of the target element if found, and -1 otherwise.	10	28/11/2025	

8	Write a C program that includes a user-defined function named countSetBits with the signature int countSetBits(int num); . The function should count and return the number of set bits (1s) in the binary representation of the given number.	12	04/12/2025	
9	Write a C program that includes a user-defined function named setBit with the signature int setBit(int num, int position); . The function should set the bit at the specified position (0-indexed) to 1 and return the modified number.	13	05/12/2025	
10	Write a C program that defines a structure Rectangle with attributes length and width. Include a user-defined function named calculateArea with the signature float calculateArea(struct Rectangle r); . The function should calculate and return the area of the rectangle.	14	30/01/2026	
11	Write a C program that defines a structure Student containing the attributes rollNumber, name, and marks. Include a user-defined function named displayStudent with the signature void displayStudent(struct Student s); . The function should display the details of a student.	15	30/01/2026	
12	Write a C program that takes multiple integers as command-line arguments and finds the maximum and minimum value among them.	17	26/02/2026	
13	Write a C program that accepts a string as a command line argument and includes a userdefined function named isPalindrome with the signature int isPalindrome(char str[]); . The function should check if the given string is a palindrome and return 1 if it is, and 0 otherwise.	18	26/02/2026	
14	Write a C program that opens its own source code file, reads its contents, and then prints the contents to the console.	20	23/03/2026	
15	Write a C program that reads a sequence of integers from a file named 'input.txt'. This program should segregate the odd numbers from the even numbers and store the odd numbers in a new file named 'ODDFile.txt' while storing the even numbers in another file named 'EVENFile.txt'.	21	23/03/2026	