Lab work
Functions

1. Write a function named is_*even* that takes an integer value as parameter and returns 1 if the parameter value is even, or 0 otherwise. Write the *main()* function so that it takes an integer number from keyboard, calls *is_even()* function, and shows appropriate output.

2. Write a function named *cal_sum* that takes three integer arguments and returns the sum of the values of the arguments. Write the *main()* function so that it takes three integer numbers from keyboard, calls *cal_sum()* function, and shows the sum of the three numbers.

3. Write a function named *is_uppercase* that takes a character as input and returns 1 if the parameter is an uppercase letter, or 0 otherwise. Write the *main()* function so that it takes a character from keyboard, calls *is_uppercase()* function, and shows appropriate output.

4. Write a function named *change_case* that will take a character as input and returns the opposite-case letter (i.e., returns uppercase letter if the parameter is a lowercase letter, and vice versa). Write the *main()* function so that it takes a character from keyboard, calls *change_case()* function, and shows appropriate output.

5. Write a function named *calculate_grade* that returns the letter grade of the input parameter value according to the following rule. [input parameter will be marks]

Marks	Letter Grade
87 <= Marks <= 100	A
77 <= Marks <= 86	B
67 <= Marks <= 76	C
60 <= Marks <= 66	D
0 <= Marks < 60	F
100 < Marks < 0	I

6. Write a function named *cal_power* that takes two integer parameters named *base* and *exponent* and returns the value of *base* raised to the power *exponent* (i.e., the function computes the power). Write the *main()* function so that it takes two integer number from keyboard, calls *cal_power()* function and shows the result.

7. Write a function named *digitCount* that takes a positive integer as parameter and returns the number of digits in the integer. Write the *main()* function so that it takes an integer from keyboard, calls *digitCount()* function, and shows the return value.

8. Write a function named *square* that takes an integer as parameter and returns the square value of the integer. Write the *main()* function so that it takes an integer from keyboard, calls *square()* function, and shows the return value.

9. Write a function named *sort* that takes an integer array and its length as input and **sorts** the values of the array **in ascending order**. Write the *main()* function so that it takes 5 integers from keyboard, put them in an array, calls the *sort()* function, and displays the sorted array.

10. Write a function named *search_number* that takes three arguments – 1) an integer array, 2) its length, and 3) an integer number to search from the array. The function should return 1 if the integer number (3rd parameter) is found in the array (1st parameter), or 0 is not found. Write the *main()* so that it takes 10 integers from keyboard, put them in an array, and takes another integer number that will be searched from the array. Afterwards main() function should call search_number() function with correct arguments. Finally, the program should output whether the search number is found in the array or not. This is called *Searching*.