Lab. 9 – Pointers, Function, Loops

1. Write a program that:
- Writes odd numbers from the interval [1; 100].
- Writes numbers divisible by 5 from the interval [1; 50] (continue).
- Writes the sum of array table elements int array_sum [] = {5,2,4,6,1,0, -20,10,20}.
- The entire ASCII character array.
2. Using the switch statement, build the calculator (4 basic operations). The choice of operation is a condition of the switch statement.
3. Write a program that draws a Christmas tree at the height indicated by the user. Apply the break statement.
4. Write a program with an infinite for loop, which if you enter the letter q will end the program (break statement).
5. Write a structure representing a point in two-dimensional vector space. Use it in a function that calculates the distance between two points.
6. Write a structure representing a circle in a two-dimensional vector space. Use it in a function that decides whether the given point belongs to the inside, the edge or is outside the circle.
7. Write a program in C to print all the alphabets using a pointer.
8. Write a program in C to print a string in reverse using a pointer.
9. Write a program in C to compute the sum of all elements in an array using pointers.
   Test Data :
   Input the number of elements to store in the array (max 10) : 5
   Input 5 number of elements in the array :
   element - 1 : 2
   element - 2 : 3
   element - 3 : 4
   element - 4 : 5
   element - 5 : 6
   Expected Output :
   The sum of array is : 20
10. Using dynamic memory allocation, write a program that will fill the array with squares of consecutive numbers. The size of the array will be defined by the user during the program.