Assignment-3

1.Write a C program to declare an integer and a pointer to an integer. Assign the address of the integer to the pointer and use the pointer to modify the integer's value.

2.Create a C program that declares an array of integers. Use a pointer to traverse the array and print each element's value and address.

3.Write a C program where you declare an integer, a pointer to an integer, and a pointer to a pointer to an integer. Initialize and display the values using these pointers.

4.Write a function that takes two integer pointers as parameters and swaps the values they point to. Test this function in your main program.

5.Implement a C program to find the maximum element in an array of integers using pointers.

6.Write a C program that uses malloc to dynamically allocate an array of integers. Fill this array with data and then free the memory.

7.Create a structure for a student that includes fields for ID and GPA. Write a function that takes a pointer to the student structure and prints the data.

8.Write a function that takes an integer array and its size, and returns a pointer to a new array containing only even numbers from the input array.

9.Write a C program that reverses a string using pointers.

10.Write a program that creates an array of pointers to float. Use this array to store the addresses of five different float variables and print their values.

11.Implement a C program that has a function to calculate the sum and average of an array of integers. Pass the array and its size to the function using pointers.

12. Write a C program to swap two arrays using pointers.

13.Create a function that takes three integers as input and uses pointers to return their sum, average, and product.

14.Write a program that declares a pointer to a function which takes two integers and returns a float. Implement and test the function.

15.Develop a C program that dynamically allocates memory for a 2D array using pointers. Fill the array with values and then print them.

16. Write a C program to reverse an array using pointers.