CCS1063 | CSE1062 Fundamentals of Programming

- Lab Sheet 08 -

1. Write a program in C to add two numbers using pointers.
2. Write a program in C to add numbers using call by reference.
3. Write a program in C to find the maximum number between two numbers using a pointer.
4. Write a program in C to store n elements in an array and print the elements using pointers.
5. Write a program in C to find the largest element using Dynamic Memory Allocation.
6. Write a program in C to calculate the length of the string using a pointer.
7. Write a program in C to swap elements using call by reference.
8. Write a program in C to find the factorial of a given number using pointers.
9. Write a program in C to print all permutations of a given string using pointers.
10. Write a program in C to count the number of vowels and consonants in a string.
11. Write a program in C to sort an array using a pointer.
12. Write a program in C to compute the sum of all elements in an array using pointers.
13. Write a program in C to print the elements of an array in reverse order using pointers.
14. Write a program in C to print a string in reverse order.
15. Write a program in C to print all the alphabets using a pointer.
16. Write a C program to store and print the student ID number, name, age, address and marks of 5 students using struct.
17. Write a program to add two distances in inch-feet using struct. The values of the distances is to be taken from the user.
18. Enter the marks of 5 students in Chemistry, Mathematics and Physics (each out of 100) using a struct named Marks having elements ID no., name, chem_marks, maths_marks and phy_marks and then display the percentage of each student.

19. Write a program to add, subtract and multiply two complex numbers using struct to function.

20. Write a struct to store the ID number, name, age (Between 11 to 14) and address of students (more than 10) and store their information.
    - Write a function to print the names of all the students having age 14.
    - Write another function to print the names of all the students having even ID number
    - Write another function to display the details of the student whose ID number is given (i.e. ID number is entered by the user).

21. Write a struct to store the name, account number and balance of customers (more than 10) and store their information.
    - Write a function to print the names of all the customers having balance less than Rs.200.
    - Write a function to add Rs.100 in the balance of all the customers having more than Rs.1000 in their balance and then print the incremented value of their balance.

22. Write a program to compare two dates entered by user. Make a struct named Date to store the elements day, month and year to store the dates. If the dates are equal, display "Dates are equal" otherwise display "Dates are not equal".

23. Create a struct named Date having day, month and year as its elements. Store the current date in the struct. Now add 45 days to the current date and display the final date.

24. Write a struct to store the names, salary and hours of work per day of 10 employees in a company. Write a program to increase the salary depending on the number of hours of work per day as follows and then print the name of all the employees along with their final salaries.

Hours of work per day	8	10	12
Increase in salary	Rs.500	Rs.1000	Rs.1500

25. Let us work on the menu of a library. Create a struct containing book information like accession number, name of author, book title and flag to know whether book is issued or not. Create a menu in which the following can be done.
    - Display book information
    - Add a new book
    - Display all the books in the library of a particular author
    - Display the number of books of a particular title

- Display the total number of books in the library
- Issue a book

(If we issue a book, then its number gets decreased by 1 and if we add a book, its number gets increased by 1)