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| **Unit – 4** | | |
| **Day – 16** | | |
| **Lec #** | **Topics to be covered :** | **Assignments :** |
| 1 | Declaring structures and structure variables, Accessing the members of the structure, Initialization of Structures | **Essential Assignment**   1. Write a C program to read and print employee details using structure.  * To store multiple employee details we will use an array of structures. Each element in the array will represent a single employee. * Each Structure i.e. Employee contains: * Name * Id * Salary * In our program, we will read the inputs for each employee from the user, and then output all employee details by iterating through the array using the ‘for’ loop.  1. In the above program, we are directly asking the user to input the salary of every employee. In case we need to calculate the salary from the basic, we will have to add an extra variable(basic\_salary) to the structure and calculate the net\_salary using the formula: net\_salary = basic\_salary + HRA + DA – PF   Where,  HRA is 10% of basic salary i.e., HRA=basic\_salary\*0.1;  DA is 5% of basic salary i.e., DA=basic\_salary\*0.05;  PF is 12% of basic salary i.e., PF=basic\_salary\*0.12;  Putting them in the formula: net\_salary = basic\_salary \* (1+ 0.1 + 0.05 – 0.12).   1. Write a C program to create a structure for employee and store the following details :   (Grade, Basic and Allowance) and create the two members of employee and copy one member details in to another member details.  **Desirable Assignment**   1. Write a C program to create a structure for student and store the following details :   (name,course,year,gender,percentage)   * Take the details of N students. * Include a menu that will allow user to select any of the following features: * Search a student whose percentage is greater than 80. * Sort the students detail by percentage wise in descending order.  1. Write a menu-based program in C that uses a set of functions to   Perform the following operations:   * Reading a complex number. * Writing a complex number. * Addition of two complex numbers. * Subtraction of two complex numbers. |
| 2 | Structure comparisons and copying, typed and its use. |