Tutorial

CO: Ability to distinguish between structured and OO programming

1.   Write a program to compute the roots of a quadratic equation. **Using functions is not allowed**
Now write the same program with program structuring
What are the advantages/disadvantages of program structuring?

2.   What is the structure of a program to compute
    a. $F(x) = 1 + x/2! + x^2/3! + x^3/4! \dots\ x^n/(n-1)!$
    b.   A program for railway reservation is to be designed. The reservation system consists of filling the registration request, presenting it to the clerk who enters the information in the computer screen, checking availability, receiving payment and confirming the booking. Passengers may be put on the waiting list.
    c.   An Institute wants to computerize its admission process from receipt of applications to printing of admission letter.

3.   Every employee has an identity (integer) and a salary (float). An organization has five employees.
    a.   WAP to find the total salary paid by the organization using only the data types integer and float.
    b.   Use arrays in addition to integer and float to find the total salary paid by the organization.
    c.   Compare the two programs for a and b above
    d.   Use structure as well to find the total salary paid by the organization
    e.   Compare 3b with 3d

4.   The sanctioned strength of a department is 60 persons. Each person has an identification number[(integer), gender (char), salary (float). The department hires and fires persons. Select an appropriate data structure.

5.   An organization has ten employees whose salary values are available in an array.

    a.   Print the sum of salaries of those employees who earn more than Rs. 50,000. **Use assignment, IF THEN ELSE, goto label**
    b.   Find the first employee with salary > Rs. 50,000 and print the salary value. **Use assignment, IF THEN ELSE, goto label**
    c.   Now use the FOR and WHILE respectively to do 5a and 5b.
    d.   Evaluate your experience