1. KLE Technological University is one of the reputed institutions in Karnataka. Every year more than 1000 students will join the Institution for the UG and PG Programs. “C programming for Problem Solving” course is the basic programming course that every student studies in the first semester. This year there are N numbers of students studying the course The class teacher conducts X number of Internal Evaluations for the same.

Apply the PSF to read and display the marks of each student in X internal Evaluations. Calculate the average marks in each evaluation as well as average marks of each student.

1. Indian Cricket team is doing so well in all 3 formats: (1) 20-20 2) ODI 3) TEST) -of the game. They are number 1 in Test Rankings. Rohit Sharma and Rahul Dravid are leading the team well.

Assume that currently Indian squad has N players and read the runs scored by each of them in 20-20, ODI and TEST matches respectively. Display the total runs scored by each player. Apply Problem Solving Framework to solve the above problem.

1. There are N employees working In a Software Company. Currently the company is handling M projects. An employee may work on more than one project. If an employee is working on a project, then enter 1 against that project. If an employee is not working on a project then enter 0 against that project.

Apply Problem Solving Framework to calculate and display how many employees are working on each project and display which project is having maximum number of employees working on it.

1. India developed COVID vaccine to fight against the PANDEMIC. Indian government has supplied COVID vaccine to Dharwad district also. Now its responsibility of District officers to distribute the COVID vaccine to each and every PRIMARY HEALTH CENTERS present in the district. Assume that Dharwad district has N PRIMARY HEALTH CENTERS. According to the need, the district officer distributes different number of COVID vaccines to each PRIMARY HEALTH CENTER.

Apply Problem Solving Framework to read number of COVID vaccines supplied to each PRIMARY HEALTH CENTER. Calculate and display the minimum number of COVID vaccine supplied to a PRIMARY HEALTH CENTER.

1. Indian Badminton Association has N International badminton players. During the year 2015-2020 each of them played M matches. For each player and for each match read the outcome of that match (Enter ‘W’ if the player won the match. Enter ‘L’ if the player lost the match). Display how many matches won by each player. Apply Problem Solving Framework to solve the problem.
2. In a computer vision application, for object detection Yollo algorithm is used. The input for the algorithm is an image in the 2-D matrix format. The algorithm requires the matrix to be rotated at an angle of 90 degrees. Apply PSF to read the image and display the rotated image.

(HINT: Transpose of a matrix)

1. Write a C program to read 2 matrices and calculate the multiplication of the matrices.
2. Write a C program to read a square matrix and replace all the diagonal elements with ‘1’(one) and all the non-diagonal elements with ‘0’(zero).
3. Temperature is measured 3 times a day 1) Morning 2) Noon 3) Evening for 7 days consecutively. Apply PSF to read the temperature measurements and display the maximum temperature recorded in Morning, Noon and Evening sessions over the 7 days.
4. Write a C program to check whether a given matrix is ORTHOGONAL or not.