Exercises

- **All questions carry equal weightage/ marks.**
- **Perform all the tasks within the due date to avoid any penalties.**

Task 1:

Write a program that reads the 10 numbers from the user. Your program should provide a searching mechanism in such a way that how many times a particular number occurred and then print it on screen. If the number is not in the array, then the program should display a message “number not found”.

Task 2:

An instructor has 10 students in his class. Each student is identified by a number from 1 to 10. Marks are stored in a one-dimensional array. The instructor would like to enter a student’s test score printed on the monitor. Develop a program to output the needed information, find the highest number, average number and minimum number.

Task 3:

Given an array arr[] of size N which contains elements from 0 to N-1, You need to print * for every even number.

Task 4:

Write a program that repeatedly asks users about creating new accounts for a bank. Every time a user can respond in three ways, Y, N or E. If Y, then input IDs, initial balance and validity in days. If N, then print a message “I will ask again”, and again ask for user preference. If E, then exit the repetition. Before the program ends, you are required to print all ID, all balances and their validity in a tabular form. At the end of the table, do print total IDs count, total balance, and minimum validity.

Task 5:

A hybrid vehicle needs a program that keeps track of the fuel usage and battery usage. This program runs indefinitely and stores information for all travels. In each travel, the program asks about KM driven under the speed of 40 KM/h speeds, KM driven over the speed of 40 KM/h speed. Assuming that the vehicle uses 1 L for 15 KM and 1 full battery for 30 KM. Calculate the total cost of all travels if 1 L is bought at the rate of XYZ rupees (XYZ is first three digits of your ID). Every time the user enters the details, print the total KM driven so far, the total cost of the fuel and number of times the battery is completely used.