# Lab 9: Arrays and Functions

## Objectives:

To understand the syntax of character array, declaration, assignment and initialization

To learn to write programs to model repetitive data using arrays

## Tasks:

1. UET is maintaining student attendance records of 10 students by storing roll no, and attendance percentage in 3 different subjects. Write a program to find the average attendance percentage and print the following

a) If attendance percentage >=75 then print student is eligible for writing final exam.

b) If attendance percentage >= 65 and <75 then print student is in condonation list.

c) Otherwise not eligible for writing exams.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Roll num-** | **1** | **2** | **3** | **…** | **10** |
| **Sub 1 ->** | **50** | **45** | **69** |  | **87** |
| **Sub 2->** | **60** | **80** | **95** |  | **88** |
| **Sub 3 ->** | **80** | **94** | **40** |  | **69** |

1. Store the temperature of last 10 days of 3 cities in the database and display for how many days the temperature was below 30 degree and how many days it was above 30 in each city. Find the average temperature of each city and display which city is the warmest.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Day 1** | **Day 2** | **Day 3** | **Day . . .** | **Day 10** |
| **City 1** | **30** | **31** |  |  |  |
| **City 2** | **20** | **30** |  |  |  |
| **City 3** | **5** | **32** |  |  |  |

1. Take a set of N students’ examination marks (in the range 0 to 100) as input, Formulate a program that makes a count of the number of students that passed and failed the examination separately. A pass is awarded for all marks of 50 and above. Display the result position wise.
2. Take an array as input from user and calculate the following:
   1. Mean
   2. Median
   3. Mode
3. Write a program that has the following user defined functions:
   1. Strcmp
   2. Strcat
   3. Strrev
   4. Strlen
   5. Strcpy
   6. Tolower
   7. Toupper