National Institute of Technology Calicut
Department of Computer Science and Engineering
Third Semester B. Tech.(CSE)
CS2092D Programming Laboratory
Sample Questions

Submission deadline (on or before):

- 16.08.2021, 11:00 PM

Policies for Submission and Evaluation:

- You must submit your assignment in the Eduserver course page, on or before the submission deadline.
- Ensure that your programs will compile and execute without errors in the Linux platform.
- During the evaluation, failure to execute programs without compilation errors may lead to zero marks for that evaluation.
- Detection of ANY malpractice related to the lab course can lead to awarding an F grade in the course.

Naming Conventions for Submission

- Submit a single ZIP (.zip) file (do not submit in any other archived formats like .rar, .tar, .gz). The name of this file must be

  `ASSG<NUMBER>_<ROLLNO>_<FIRST-NAME>.zip`

  (Example: *ASSG*1_*BxxyyyyCS_LAXMAN.zip*). DO NOT add any other files (like temporary files, input files, etc.) except your source code, into the zip archive.

- The source codes must be named as

  `ASSG<NUMBER>_<ROLLNO>_<FIRST-NAME>_<PROGRAM-NUMBER>.c`

  (For example: *ASSG*1_*BxxyyyyCS_LAXMAN*_1.*c*). If you do not conform to the above naming conventions, your submission might not be recognized by our automated tools, and hence will lead to a score of 0 marks for the submission. So, make sure that you follow the naming conventions.

Standard of Conduct

- Violation of academic integrity will be severely penalized. Each student is expected to adhere to high standards of ethical conduct, especially those related to cheating and plagiarism. Any submitted work MUST BE an individual effort. Any academic dishonesty will result in zero marks in the corresponding exam or evaluation and will be reported to the department council for record keeping and for permission to assign F grade in the course. The department policy on academic integrity can be found at: http://cse.nitc.ac.in/sites/default/files/Academic-Integrity_new.pdf.

General Instructions

- Programs should be written in C language and compiled using C compiler in Linux platform. **Submit the solutions to questions 1 and 2 through the submission link in Eduserver**.

QUESTIONS

1. Write a C program to check whether an input integer number is palindrome or not.

   Input format:

   - The input is an integer $n \in [0, 10^5]$.

   Output format:

   - If the integer is palindrome, print YES.
   - If the integer is not palindrome, print NO.

   Sample Input 1: 1221

   Sample Output 1: YES

   Sample Input 2: 1225

   Sample Output 2:NO

2. Write a C program to count how many palindromes are present in a given array of integers. Program must have a separate function PALINDROME(int) to check whether an integer is palindrome.

   Input format:

   - The first line of the input contains an integer $n \in [0, 10^4]$, the size of the array A.
   - The second line lists the n elements in A, as space-separated integers in the range $[-1000, 1000]$.

   Output format:

   - An integer indicating the count of palindromes in the input array

   Sample Input 1:
   7
   25 55 75 101 131 215 252

   Sample Output 1:
   4

   Sample Input 2:
   5
   10 35 65 123 155

   Sample Output 2:
   0