

National Institute of Technology Calicut  
Department of Computer Science and Engineering

Monsoon 2021  
S1 MCA  
CS2092D Programming Laboratory

**Policies for Submission and Evaluation**

You must submit your assignment in the moodle (Eduserver) course page, on or before the submission deadline. Also, ensure that your programs in the assignment must compile and execute without errors in any server. During evaluation your uploaded programs will be checked in your personal computer only. Failure to execute programs in the assignment without compilation errors may lead to zero marks for that program.

Your submission will also be tested for plagiarism, by automated tools. In case your code fails to pass the test, you will be straightaway awarded zero marks for this assignment and considered by the examiner for awarding F grade in the course. Detection of ANY malpractice regarding the lab course will also lead to awarding an F grade.

Last date for submitting: 11/11/2021 10:00 Hrs

**Naming Conventions for Submission**

Submit a single ZIP (.zip) file (do not submit in any other archived formats like .rar or .tar.gz). The name of this file must be ASSG<NUMBER>\_<ROLLNO>\_<FIRSTNAME>.zip. (eg: ASSG1\_MxxxyyyCA\_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>\_<FIRSTNAME>\_<PROGRAM-NO>.<extension>. (For example: ASSG2\_MxxxyyyCA\_LAXMAN\_1.c). If there are multiple parts for a particular question, then name the source files for each part separately as in ASSG2\_MxxxyyyCA\_LAXMAN\_1b.c.

If you do not conform to the above naming conventions, your submission might not be recognized by some automated tools, and hence will lead to a score of 0 for the submission. So, make sure that you follow the naming conventions.

**Standard of Conduct**

Violations 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 an F grade in the course. The department policy on academic integrity can be found at:

[https://minerva.nitc.ac.in/sites/default/files/attachments/news/Academic-Integrity\\_new\\_0.pdf](https://minerva.nitc.ac.in/sites/default/files/attachments/news/Academic-Integrity_new_0.pdf)

## Assignment-1 Questions

1. Check for Prime Number

Input : 44

Output: Not Prime

2. Program to display palindrome numbers in a given range

Input: 150 200

Output: 151 161 171 181 191

3. Program to check leap year

Input: 1991

Output: not a Leap Year

4. Check whether a given number is a perfect number or not (A perfect number is a number which is equal to the sum of its proper positive divisors)

Input : 6

Output: 6 is a perfect number with divisors 1,2,3.

5. Find GCD of two Numbers

Input: 81 153

Output: 9

6. Program in C to separate the individual characters from a string

Input: ProgrammingLab

Output: P r o g r a m m i n g L a b

7. Program in C to count the total number of words in a string

Input: National Institut of Technology Calicut

Output: 5

8. Program to find Sum of series  $S=1+(1+2)+(1+2+3)+\dots+(1+2+3+\dots+n)$

Input :10

Output: 220

9. Print a pattern as shown in the example for a given integer value.

Input: N = 4

Output:

```
4 4 4 4 4 4 4
4 3 3 3 3 3 4
4 3 2 2 2 3 4
4 3 2 1 2 3 4
4 3 2 2 2 3 4
4 3 3 3 3 3 4
4 4 4 4 4 4 4
```

10. X Pattern in C

Input : N=6

```
*      *
*      *
*      *
*      *
* *
*
* *
* *
*      *
*      *
*      *
*      *
```