

Birla Institute of Technology & Science, Pilani, K. K. BIRLA Goa Campus
Computer Programming (CS F111)
Second Semester 2013-2014
Lab-6 (C Programming - Loops)

Question #1

Write a C program to print the following pattern when user enters a Num and N. N should satisfy the condition of $\leq \text{Number of Digits}(\text{Num}) - 1$.

Each position is calculated as the factorial of the absolute difference of 2 digits.

The pattern format is:

$\langle |\text{Digit0} - \text{Digit0}|! \rangle \langle |\text{D0} - \text{D1}|! \rangle \dots \dots \text{N terms}$

N-1 terms

N-2 terms

:

:

1 term

:

:

N-2 terms

N-1 terms

N terms

If the entered number is 128652 and if $N = 5$ then print should be

|2-2|! |2-5|! |2-6|! |2-8|! |2-2|!

|2-1|! |5-2|! |5-5|! |5-6|!

|5-8|! |5-2|! |5-1|!

|6-2|! |6-5|!

|6-6|!

|6-8|! |6-2|!

|6-1|! |8-2|! |8-5|!

|8-6|! |8-8|! |8-2|! |8-1|!

|2-2|! |2-5|! |2-6|! |2-8|! |2-2|!

which will print as

1 6 24 720 1

1 6 1 1

6 6 24

24 1

1

2 24

120 720 6

2 1 720 5040

1 6 24 720 1

Question #2

Get a 5 digit number as input from the user (make sure it is a 5 digit number). Find whether the entered number is palindrome or not. If it is not a palindrome see whether you can make a palindrome number from these digits. If palindrome number is not possible display “We cannot construct a Palindrome number from the given number”.

Sample Input and Output:

Enter a 5 digit number: 123456

Not a palindrome Number

Impossible to make it a palindrome

Enter a 5 digit number : 12312

Not a palindrome Number

It is possible to make a palindrome number out of 12312.