

# C-Programming Lab Sheet

## I Year / I Part

### Faculty: Civil/Computer/Electrical

#### Labsheet#5

#### Objectives:

- To familiarize with different types of looping statement such as for, while, do...while, nesting loop.

1. WAP to read integers **n1** and **n2** (such that **n1 < n2**) and display all **even numbers** between those two numbers.
2. WAP that reads an integer value for **n** then **sums the integers** from **n** to **2n** if **n** is **non-negative**, or from **2n** to **n** if **n** is **negative**. Display the **sum**.
3. WAP that will generate every third integer beginning with **i=2** and continuing for all integers that are **less than 100**. Calculate the **sum** of these numbers that are exactly **divisible by 7**.
4. Write a computer program to display a **table of numbers**, its **square value** and its **cube values** from **1 to n-1**, where **n** is any number typed by user at the terminal.
5. WAP to find the sum of the following series,  

$$y = \sum \frac{1}{n^2} \text{ up to } n \text{ term. [5]}$$

$$e^x = 1 + \frac{x^1}{1!} + \frac{x^2}{2!} + \frac{x^3}{3!} \dots \frac{x^n}{n!}$$
6. WAP to compute the **sine series**.  
**(hint:  $x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \dots \frac{x^n}{n!}$ )** up to **n** terms.
7. WAP to compute the **cosine series**.  
**(hint:  $1 - \frac{x^2}{2!} + \frac{x^4}{4!} - \frac{x^6}{6!} + \dots \frac{x^n}{n!}$ )** up to **n** terms.
8. WAP to enter a number and print its reverse.
9. WAP to calculate **sum of digits** of an integer number.
10. WAP to check whether a given number is palindrome or not.
11. WAP to find sum of **last digit** and **first digit** of a given number.
12. WAP to check whether a given number is **Armstrong number or not**.
13. WAP to find **binary equivalent** of a decimal integer number.
14. WAP to read integer numbers from the users and find their sum until the user types ctrl+Z keys on the keyboard. Display the sum.

## Patterns

## Nested for loop

5 4 3 2 1	5	Programming	wk
5 4 3 2	5 4	rogrammin	owk
5 4 3	5 4 3	ogrammi	howk
5 4	5 4 3 2	gramm	chowk
5	5 4 3 2 1	ram	lchowk
		a	ulchowk
			pulchowk

P	P	P
PU	PU	Pu
PUL	PuL	PuL
PULC	PULC	PULC
PULCH	PuLcH	PuLcH
PULCHO	PULCHO	PULCHO
PULCHOW	PuLcHoW	puLcHoW
PULCHOWK	PULCHOWK	PULCHOWK

[illegible]