

# Assignment- 1

## Programming and Problem Solving with C

<https://github.com/nanajinaik/C-class-assignment->

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### 1. Conditional & Looping Constructs

1. ENTER NUMBER TO CHECK EVEN OR ODD:26

NUMBER IS EVEN

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2. ENTER FIRST NUMBER :24  
ENTER SECOND NUMBER :13

ENTER THIRD NUMBER :26

GREATEST NUMBER IS 26.000000

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3. ENTER YEAR :2024

YEAR IS LEAP YEAR

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4. enter number to add till it: 5  
sum of first 5 natural numbers is 15

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5. ENTER NUMBER TO GET ITS TABLE:9

9 X 1=9

9 X 2=18

9 X 3=27

9 X 4=36

9 X 5=45

9 X 6=54

9 X 7=63

9 X 8=72 9 X 9=81 9 X

10=90

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**6.**Enter any digit number : 1234

The reverse of 1234 is : 4321

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**7.**ENTER FIRST NUMBER:24

ENTER SECOND NUMBER:25

ENTER YOUR OPRETION TYPE-

1 FOR ADDITION

2 FOR SUBTRACTION

3 FOR MULTIPLICATION

4 FOR DIVISION

1

SUM OF BOTH NUMBERS IS 49.000000

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**8.**ENTER NUMBER TO FINT FACTORIAL:5

FACTORIAL IS 120

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**9.**Enter a number: 12321

Numberis palindrome.

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## **Arrays (1D & 2D)**

**1.**How many numbers do you want to compair:4

1. ENTER NUMBER :12

2. ENTER NUMBER :54

3. ENTER NUMBER :2

4. ENTER NUMBER :34 54  
is greatest among them  
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2.ENTER NUMBER OF ELEMENTS:3  
ENTER NUMBER 1: 12  
ENTER NUMBER 2: 34  
ENTER NUMBER 3: 54  
SUM OF ALL NUMBERS 100 AND AVERAGE IS 33.000000  
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3.Enter number of elements: 4  
Enter 4 elements:125411 9  
Array in ascendingorder: 9 11 12 54  
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4.ENTER NUMBER OF ELEMENTS: 4  
ENTER NUMBER 1: 1  
ENTER NUMBER 2: 2  
ENTER NUMBER 3: 1  
ENTER NUMBER 4: 4 1  
COMES 2 TIMES 2  
COMES 1 TIMES 4  
COMES 1 TIMES  
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**5.**ENTER NUMBER OF ELEMENTS IN FIRST ARRAY: 2

ENTER NUMBER OF ELEMENTS IN SECOND ARRAY: 3

FOR FIRST ARRAY ENTER ELEMENT 1: 1 ENTER  
ELEMENT 2: 4

FOR SECOND ARRAY

ENTER ELEMENT 1: 3

ENTER ELEMENT 2: 2

ENTER ELEMENT 3: 5

NEW ARRAY IS: 1 4 Nanajinaik,125113032

3 2 5

**6.**enter number of rows:2

enter number of columns:2

for first matrix

enter number in (0,0):1

enter number in (0,1):2

enter number in (1,0):4

enter number in (1,1):3

for second matrix

enter number in (0,0):7

enter number in (0,1):6

enter number in (1,0):5

enter number in (1,1):4

first matrix is-

1 2

4 3

second matrix is-

7 6

5 4

sum of both matrices is-

8 8

9 7

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7.enter number of rows:2  
enter number of columns:3  
enter number in (0,0):1  
enter number in (0,1):3  
enter number in (0,2):2  
enter number in (1,0):4  
enter number in (1,1):6  
enter number in (1,2):5  
matrix is-  
1    3    2  
4    6    5  
transpose of matrix is-  
1    4  
3    6  
2    5  
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8.enter number of rows/columns:2  
enter number in (0,0):1  
enter number in (0,1):9  
enter number in (1,0):8  
enter number in (1,1):4  
matrix is-  
1    9  
8    4  
sum is 22  
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# Structures

1.

student's details-

name: Nanajinaik

roll no.: 125113032

marks: 100

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2.NUMBER OF STUDENTS:3

FOR STUDENT 1 ENTER NAME OF

STUDENT: Nanaji

ENTER MARKS OF STUDENT :100

FOR STUDENT 2

ENTER NAME OF STUDENT: Vaibhav

ENTER MARKS OF STUDENT :90

FOR STUDENT 3

ENTER NAME OF STUDENT: Tanish

ENTER MARKS OF STUDENT :80

STUDENT WITH MAXIMUM MARKS -

NAME: Nanaji

MARKS: 100

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3.NUMBER OF BOOKS:3

FOR BOOK 1 ENTER NAME OF BOOK:

MATHS

ENTER PRICE OF BOOK :800

FOR BOOK 2 ENTER NAME OF BOOK:

PHYSICS

ENTER PRICE OF BOOK :400

FOR BOOK 3 ENTER NAME OF BOOK:

CHEMISTRY

ENTER PRICE OF BOOK :10

BOOK NAME "MATHS" AND PRICE IS 800

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**4.NUMBER OF STUDENTS:3**

FOR STUDENT 1 ENTER MARKS OF STUDENT :100

FOR STUDENT 2 ENTER MARKS OF STUDENT :90

FOR STUDENT 3 ENTER MARKS OF STUDENT :80

AVERAGE MARKS OF ALL STUDENTS ARE 90.000000

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**5.ENTER BASIC SALARY: 100000**

ENTER DA SALARY: 20000

ENTER HRA SALARY: 10000

GROSS SALARY OF EMPLOYEE IS 130000.000000

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**6.ENTER EMPLOYEE NAME: Nanaji**

ENTER EMPLOYEE POST: MANAGER

ENTER EMPLOYEE ADDRESS: Andhra  
pradesh

ENTER EMPLOYEE SALARY: 100000

EMPLOYEE DETAILS- NAME: Nanaji

ADDRESS: Andhra Pradesh

POST: MANAGER

SALARY: 100000.000000

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**7.Enter student name: Nanaji**

Enter roll number: 125113032

Enter date of birth (DD MM YYYY): 04 12 2006

## Student Details

Name : Nanaji

Roll : 125113032

DOB : 04-12-2006

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### 8. Enter number of students: 3

Enter details of student 1:

Roll Number: 125113032

Name: Nanaji

Marks: 100

Enter details of student 2:

Roll Number: 125113039

Name: VAIBHAV

Marks: 90

Enter details of student 3:

Roll Number: 125113047

Name: TANISH Marks: 80

## Student Records (Sorted by Roll Number)

Roll: 125113039 Name: VAIBHAV Marks: 90.000000

Roll: 125113041 Name: Nanaji Marks: 100.000000

Roll: 125113047 Name: TANISH Marks: 80.000000

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## Pointer

### 1. Enter first number: 23

Enter second number: 12

Before swaping a=23 and b=12

After swaping a=12 and b=23

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**2.**Enter number of elements: 4

Enter 4 elements: 12 13 56 3

Sum of array elements = 84

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**3.**Enter string: KURUKSHETRA

string length is 11

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**4.**Enter string: Nanaji

Second string is Nanaji

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**5.**Enter name: Nanaji

Enter roll number: 125113032

Enter marks: 95

Student Details Name : Nanaji

Roll : 125113032

Marks : 95.000000

After bonus marks:

Updated Marks: 100.000000

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**6.**Enter number of elements: 3

Enter elements 1: 12

Enter elements 2: 50

Enter elements 3: 1

Largest number = 50  
Smallest number = 1  
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7. Enter number of elements: 3

Enter elements 1: 12

Enter elements 2: 45

Enter elements 3: 23

Array elements using pointer arithmetic:

Element 1 = 12

Element 2 = 45

Element 3 = 23

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8. Enter number: 10

value of number is 10

address of number 6422296

address of pointer 6422292

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## Functions

1. Enter your number: 17

number is prime

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2. Enter a number: 5

Factorial of 5 is 120

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3. enter first number: 60

enter second number: 12

gcd is 12

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**4.**Enter a number: 12345

Reversed number: 54321

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**5.**Enter a number: 12345

Sum of digits is: 15

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**6.**Enter string: naman

String is palindrome.

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**7.**enter number of rows:2

enter number of columns:2

for first matrix

enter number in (0,0):1

enter number in (0,1):4

enter number in (1,0):3

enter number in (1,1):2

for second matrix

enter number in (0,0):8

enter number in (0,1):7

enter number in (1,0):5

enter number in (1,1):2

first matrix is-

1    4

3    2

second matrix is-

8    7

5    2

sum of both matrices is-

9    11

8    4

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**8.**Enter number of elements: 4

Enter element: 12 Enter element: 87

Enter element: 34 Enter element: 15

Average of all numbers is 37.000000

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**9.**number is 10 number is

10

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## **File Handling**

**1.**Enter text that you want to write in file:

I am Nanajinaik.

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**2.**Reading content from file:

I am Nanajinaik.

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**3.**Total Words: 7

Total Characters (excluding spaces): 29

Total Lines: 4

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**4.**Text written to file successfully.

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**5.**CONTENT OF FILE:

I am Nanajinaik

I an from ANDHRA PRADESH

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**6.**Enter number of students: 2

Enter details of student 1

Enter name: Nanaji

Enter branch: VLSI

Enter roll no.: 125113032

Enter marks: 100

Enter details of student 2

Enter name: VAIBHAV

Enter branch: VLSI

Enter roll no.: 125113039

Enter marks: 90

Student 1 details:

Name: Nanaji

Branch: VLSI

Roll: 125113032

Marks: 100.000000

Student 2 details:

Name: VAIBHAV

Branch: VLSI

Roll: 125113039

Marks: 90.000000

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**7.**Total numbers read: 5

Sum = 15.000000

Average = 3.000000

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**8.**Contents of file1.txt and file2.txt successfully merged into  
file3.txt

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