Assignment- 1
Programming and Problem Solving with C
Github-https://github.com/ajay11110/Class-assignment.git

Conditional & Looping Constructs

1.
ENTER NUMBER TO CHECK EVEN OR ODD: 26
NUMBER IS EVEN
 AJAY YADAV,125113041

2.
ENTER FIRST NUMBER :24
ENTER SECOND NUMBER :13
ENTER THIRD NUMBER :26
GREASTEST NUMBER IS 26.000000
AJAY YADAV,125113041

3.
ENTER YEAR :2024
YEAR IS LEAP YEAR
AJAY YADAV,125113041

4.
enter number to add till it: 5
sum of first 5 natural numbers is 15
AJAY YADAV,125113041

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
AJAY YADAV,125113041

6. Enter any digit number : 1234
   The reverse of 1234 is : 4321
   AJAY YADAV,125113041

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
   AJAY YADAV,125113041

8. ENTER NUMBER TO FINT FACTORIAL:5
   FACTORIAL IS 120
   AJAY YADAV,125113041

9. Enter a number: 12321
   Number is palindrome.
   AJAY YADAV,125113041

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
AJAY YADAV,125113041

3. Enter number of elements: 4
Enter 4 elements:
12
54
11
9
Array in ascending order:
9 11 12 54
AJAY YADAV,125113041

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   3   2   5
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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
AJAY YADAV,125113041

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
AJAY YADAV,125113041

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
AJAY YADAV,125113041

Structures

1. student's details-
   name: AJAY YADAV
   roll no.: 125113041
   marks: 100
   AJAY YADAV,125113041

2. NUMBER OF STUDENTS:3
   FOR STUDENT 1
   ENTER NAME OF STUDENT: Ajay
   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: Ajay
   MARKS: 100
   AJAY YADAV,125113041

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
   AJAY YADAV,125113041

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
AJAY YADAV,125113041

5. ENTER BASIC SALARY: 100000
ENTER DA SALARY: 20000
ENTER HRA SALARY: 10000
GROSS SALARY OF EMPLOYEE IS 130000.000000
AJAY YADAV,125113041

6. ENTER EMPLOYEE NAME: AJAY
ENTER EMPLOYEE POST: MANAGER
ENTER EMPLOYEE ADDRESS: JAIPUR
ENTER EMPLOYEE SALARY: 100000
EMPLOYEE DETAILS-
NAME: AJAY
ADDRESS: JAIPUR
POST: MANAGER
SALARY: 100000.000000
AJAY YADAV,125113041

7. Enter student name: AJAY
Enter roll number: 125113041
Enter date of birth (DD MM YYYY): 10
07
2008

Student Details
Name : AJAY
Roll : 125113041
DOB : 10-07-2008
AJAY YADAV,125113041

8. Enter number of students: 3
Enter details of student 1:
Roll Number: 125113041
Name: AJAY
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: AJAY   Marks: 100.000000
Roll: 125113047 Name: TANISH Marks: 80.000000
AJAY YADAV,125113041

Pointer

1. Enter first number: 23
Enter second number: 12
Before swaping a=23 and b=12
After swaping a=12 and b=23
AJAY YADAV,125113041

2. Enter number of elements: 4
Enter 4 elements:
12
13
56
3
Sum of array elements = 84
AJAY YADAV,125113041

3. Enter string: KURUKSHETRA
string lenth is 11
AJAY YADAV,125113041

4. Enter string: AJAY
Second string is AJAY
AJAY YADAV,125113041

5. Enter name: AJAY
Enter roll number: 125113041
Enter marks: 95
Student Details
Name : AJAY
Roll : 125113041
Marks : 95.000000
After bonus marks:
Updated Marks: 100.000000
AJAY YADAV,125113041

6. Enter number of elements: 3
Enter elements 1: 12
Enter elements 2: 50
Enter elements 3: 1

Largest number = 50
Smallest number = 1
AJAY YADAV,125113041

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
   AJAY YADAV,125113041

8. Enter number: 10
   value of number is 10
   address of number 6422296
   address of pointer 6422292
   AJAY YADAV,125113041

Functions

1. Enter your number: 17
   number is prime
   AJAY YADAV,125113041

2. Enter a number: 5
   Factorial of 5 is 120
   AJAY YADAV,125113041

3. enter first number:60
   enter second number:12
   gcd is 12
   AJAY YADAV,125113041

4. Enter a number: 12345
Reversed number: 54321
AJAY YADAV,125113041

5. Enter a number: 12345
Sum of digits is: 15
AJAY YADAV,125113041

6. Enter string: naman
String is palindrome.
AJAY YADAV,125113041

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
AJAY YADAV,125113041

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
AJAY YADAV,125113041

9. number is 10
number is 10
AJAY YADAV,125113041

File Handling

1. Enter text that you want to write in file:
I am AJAY YADAV.
AJAY YADAV,125113041

2. Reading content from file:
I am AJAY YADAV.
AJAY YADAV,125113041

3. Total Words: 7
Total Characters (excluding spaces): 29
Total Lines: 4
AJAY YADAV,125113041

4. Text written to file successfully.
AJAY YADAV,125113041

5. CONTENT OF FILE:
I am AJAY YADAV.
I an from JAIPUR.
AJAY YADAV,125113041

6. Enter number of students: 2
Enter details of student 1
Enter name: AJAY
Enter branch: VLSI
Enter roll no.: 125113041
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: AJAY
Branch: VLSI
Roll: 125113041
Marks: 100.000000
Student 2 details:
Name: VAIBHAV
Branch: VLSI
Roll: 125113039
Marks: 90.000000
AJAY YADAV,125113041

7. Total numbers read: 5
Sum = 15.000000
Average = 3.000000
AJAY YADAV,125113041

8. Contents of file1.txt and file2.txt successfully merged into file3.txt
AJAY YADAV,125113041