Simple C program

1. Write a program that display Hello world on screen.
2. Write a program that inputs the radius of a circle from user and find its circumference using formula 2*3.14*r*r. (store the value of pi in a constant by using DEFINE directive)
3. Write a program that take two integer from user and perform all mathematical operations.
4. Write a program that take a number from user and perform all compound operations.
5. Write a program that explain the working of postfix and prefix increment operator (used as independent expression)
6. Write a program that explain the working of postfix and prefix increment operator (used as part of larger expression)
7. Write a program that take two integer number from user and perform division on them.(type casting).
8. Write a program that take two floating point number from user and show the remainder (use explicit type casting).
9. Write a program that calculate the simple interest. User enter Amount , Rate of Interest and number of year. And program display Amount of Interest. Formula..... interest =(amount* rate * time) /100
10. Write a program that inputs a character from user and display its ASCII code.
11. Write a program that inputs two numbers from user , show on screen , swap their values and display again on screen. (using third variable)
12. Write a program that input two numbers from user , swap their values (without using third variable).
13. Write a program that inputs the distance traveled and speed of a car. Program calculate and display the time required to reach the destination . (time = distance / speed)
14. Write a program that inputs Base and Height of a triangle from user . calculate and displays the area of triangle. (area = ½ * base * height)
15. Write a program that inputs time in seconds and convert it into HH:MM:SS format.
16. Write a program that input temperature from the user in Celsius and converts it into Fahrenheit using formula F= 9 / 5 * C + 32
17. Write a program that input the height of a person in Inches and convert it in centimeters (c = I * 2.54)
18. Write a program that inputs a three-digit-number from user and display in reverse order (input 345 , output 543)
19. Write a program that inputs a 5 digit number from user and display in reverse order.
20. Write a program that inputs number of hours from user and convert it in Week: Days: Hours format.

Simple IF Statement

1. Write a program that take a number from user and check whether it is even or odd.
2. Write a program that take a number from user and check whether it is positive, negative or zero.
3. Write a program that take two numbers from user and display maximum number on screen.
4. Write a program that take three numbers from user and display maximum number on screen.
5. Write a program that take three numbers from user and display minimum number on screen.
6. Write a program that take 5 numbers from user and display Largest and Smallest integer .

IF ELSE

7. Write a program that inputs a year from user and display leap year or not.
8. Write a program that input salary and grade of an employee. It adds 50% bonus if grade is greater then 15 , it adds 25% bonus if grade is 15 or less. Display total salary.
9. Write a program that inputs two integers. It determines and prints if the first number is a multiple of second number.
10. Write a program that take name of two students from user. It check and display whether both are same or not.

IF ELSE IF

11. Write a program that inputs test marks of a student and displays his grade according to the following criteria.

Marks	Grade
>=90	A
80 - 89	B
70-79	C
60-69	D
< 60	F

12. Write a program that calculate the electricity bill. The rates of electricity per unit are as follow.

Units < = 300	Rs 2 per unit
Units > 300 and <= 500	Rs 5 per unit
Units > 500	Rs 7 per unit

A line rent RS 150 is also added to the total bill and a surcharge of 5% extra if the bill is exceeds RS . 2,000. Calculate total bill.

13. Write a program that inputs radius and user's choice . it calculates area of circle if user enters 1 as choice. It calculates circumference if the user enters 2 as choice.

NESTED IF ELSE

14. Write a program that take 3 integers from user. And display smallest integer.
15. Write a program that take three numbers fro user. And display whether all are equal or not.

COMPOUND CONDITION

16. Write a program that inputs three number from user and display maximum number using logical operator.
17. Write a program that inputs a character from user and display whether it is Vowel or not using logical operator.

18. Write a program that allows the user to enter any character through the key board and determines whether it is a capital letter, small case letter, a digit or a special symbol.
19. Write a program that inputs a number from user and display even or odd using not operator.

SWITCH

20. Write a program that inputs number of week's day and displays the name of the day. 1 Friday 2 Saturday 3 Sunday .....
21. Write a program that inputs a character from user and display whether it is vowel or consonant.
22. Write a program that input 2 numbers fro user and a symbol (+,-,/,*,%). It perform operation on numbers according to operator , and show results.

CONDITIONAL OPERATOR

23. Write a program that inputs marks of a student and display " Pass" if marks are more then 40 and display :"Fail" otherwise .
24. Write a program that take a number fro m user and display whether it is divisible by three or not.

Assignment 3
WHILE LOOP

1. ite a program that display counting from 1 to 10 .
2. rite a program that display first 5 numbers and their sum.
3. Write a program that display first 5 numbers and their squares.
4. Write a program that take a number from user and display its table imp
5. Write a program that inputs a number from user and display the sum of its digits. imp
6. Write a program that input a number from user and display its factorial imp
7. Write a program that display the sum of following series 1+ ½+ ¼ + 1/6 +1/8 +....+1/100. imp
8. Write a program that inputs a positive number. It then display the sum of all odd numbers and sum of all even numbers from 1 to number entered by user.
9. Write a program that take a number from user and check whether it is ARMSTRONG number or not. (370 , 371 are Armstrong numbers) imp
10. Write a program that take starting and ending point from user and display all numbers between them. imp
11. Write a program that inputs a number from user and display n Fibonacci terms. (if user enter 5 , program display first five Fibonacci numbers) imp

DO WHILE LOOP

12. Write a program that displays back counting from 10 to 1 .
13. Write a program that take 2 numbers from user and display the result of first number raised power second.(first= 2, second= 3 , answer=8) imp
14. Write a program that inputs a number from user and check whether it is Palindrome number or not. (121, 626, 62526, 131,222) imp

FOR

15. Write a program that display the sum of following series. $1^2+2^2+3^2+.....+10^2$ imp
16. Write a program that take a number from user and check whether it is prime or not.
17. Write a program that take 2 numbers from user and display their GCD.

NESTED LOOP

Write a program that display the following output

18.
```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

19.
```
A
A B
A B C
A B C D
A B C D E
```

20.
```
1 2 3 4 5
1 2 3 4
1 2 3
1 2
1
```

21.
```
    1
  1 2 3
1 2 3 4 5
  1 2 3
    1
```

22.
```
    *
  * * *
* * * * *
  * * *
    *
```

23.
```
    @
   @@
  @@@
 @@@@
@@@@@
```

24.
```
1
2 4
3 6 9
2 4
1
```

25.
```
@       @
 @     @
  @   @
   @ @
    @
```

Irfan Ali Muzammail Assignment 4 Reader group

ARRAYS

1. Write a program that input 5 integer from user and display their sum and average.
2. Write a program that inputs current day and month from user. It then calculate and displays the total number of days in current year till the date entered.
3. Write a program that take 10 numbers from user and display maximum number.
4. Write a program that take 10 numbers from user and display minimum number.
5. Write a program that initialize an array. Take a number from user and searches the number in array.
6. Write a program that initialize an array. Take a number from user and searches it using binary search.
7. Write a program that input in array and sort using selection sort.
8. Write a program that input in array and sort using bubble sort.
9. Write a program that read the temperature of a week. And display the maximum, minimum, average temperature of the week.
10. Write a program that take 10 numbers from user and display their Mean . (Average)
11. Write a program that take 10 numbers from user and display their Median .(middle value from sorted a
12. Write a program that take 10 numbers from user and display their Mode . (most repeated value)

2 D ARRAYS

13. Write a program that declare a 4 x 4 array. Take input from user. find maximum , minimum from array.
14. Write a program that take input in two matrices of size 3 by 4. Perform subtraction and addition on ther
15. Write a program that take input in two matrices of size 3 by 4. Perform Multiplication on them.

STRUCTURES

1. Write a program that declare a structure to store roll number, marks, average and grade. Take input of 5 students. And display topper student on screen.
2. Write a program that declares a structure to store employee number, name, hours worked, hourly rate, and gross pay. The program then inputs the employee number, name, hours worked, and hourly rate from user and display gross pay with all other information.
3. Write a program that declares a structure to store roll number and 5 subjects marks and average. Take input in marks and roll number, then display average on screen.
4. Write a program that declare a structure to store id, pages, price of a book. Program inputs data of 5 books and display the most costly book on screen.
5. Write a program that declare a structure player to store name, score, wickets, catches, matches. Take input of 5 players from user and display the best bowler name, best batsman name, and best fielder name on screen.

Irfan Ali Muzammail

Assignment 6

Reader gro

SIMPLE FUNCTION

1. Write a program that displays a message "Programming makes like easy!" using function.
2. Write a program that displays first 5 number on screen using function.
3. Write a program that displays back counting from 10 to 1 using function.

PASSING PARAMETERS TO FUNCTIONS

4. Write a program that input a number in main function, passes to function. Function check whether it is e or odd.
5. Write a program that input 2 numbers from user , passes them to a function. Function display maximum number on screen.
6. Write a program that input a number from user, passes it to a function. Function display its table.
7. Write a program that inputs a number from user, passes to a function. Function display its factorial.
8. Write a program that inputs 2 number and 1 operator, passes them to a function. Function perform the operations according to operator. (calculator working)
9. Write a program that inputs a number from user and a character, passes them to a function. Function display the square of that symbol.
10. Write a program that inputs a number from user, passes to a function. Function display whether it is prime or not.
11. Write a program that inputs a number from user, passes to a function. Function check whether it is Fibonacci or not.
12. Write a program that input a number from user, passes to a function. Function display the number in reverse order. (1234 , output= 4321)

PASS BY REFERENCE

13. Write a program that inputs two integer from user, passes them to a function. Function swap the values.

RETURN VALUE BY FUNCTION

14. Write a program that inputs base and height of a triangle in main function, passes them to a function. Then function finds the area of triangle and return it to main function. Main displayed on screen .
15. Write a program that inputs two number from user, passes them to a function. Function calculate GCD and return to main function. Main function display the gcd of numbers.

ARRAY AS PARAMETERS OF FUNCTION

16. Write a program that take 5 numbers from user, store them in array, pass array to a function. Function display the maximum number on screen.
17. Write a program that take 10 random numbers from user. Store them in an array, pass the array to a function. Function counts the even numbers from array , return to main function. Main function display on screen.
18. Write a program that take input 10 numbers in array , passes it to function. Function sort the array.

STRUCTURE AS PARAMETERS OF A FUNCTION

19. Write a program that declares a structure to store marks and grade of a student. Take input from user, store it in a structure variable, pass structure variable to a function, function display the values on screen.
20. Write a program that declare a structure student that store name, marks and roll number. Take input of 5 students in array, pass array to a function, function display the student with minimum marks.

RECURSION

21. Write a program that inputs a number from user and calculate its factorial recursively.
22. Write a program that inputs two integers and calculates first number raised power of the seconds.
23. Write a program that inputs a number from user and display back counting from n to 1 using recursion.
24. Write a program that inputs a number from user and display sum from n to 1 using recursion.
25. Write a program that inputs a number from user and display n Fibonacci term using recursion.

FILE HANDLING

1. Write a program that input 10 numbers from user, store it in a file.
2. Write a program that input 10 city names from user, store them in a file.
3. Write a program that declare a structure player that store name, wickets, matches, scores. Take input from user in a structure variable. Then store in a file.
4. Write a program that count number of words in a file.
5. Write a program that count number of character from a file.
6. Write a program that copies the content of a file to another file.
7. Write a program that display data from a file.
8. Write a program that generate 100 random numbers and store them in a file named " random.txt".
9. Write a program that take all even number from file named "random.txt" and copy in a file " even.txt".
10. Write a program that take a number from file and display its table on screen and in a file " table.txt".

Definition

1. Program
2. Algorithm
3. Pseudo code
4. Flow chart
5. Programming language
6. Low level languages
7. Machine Language
8. Assembly language
9. High level language
10. Procedural Languages
11. Object oriented languages
12. Non procedural languages
13. Source code
14. Object code
15. Language processor
16. Compiler
17. Assembler
18. Interpreter
19. Structured programming
20. History of c language
21. Preprocessor directives
22. Header files
23. Main function
24. C statements
25. Keywords
26. Identifier
27. Constants
28. Error
29. Logical error
30. Syntax error
31. Runtime error
32. Data type
33. Integer data type
34. Float data type
35. Double data type
36. Character data type
37. Range with example
38. Precision
39. Variable
40. Variable declaration
41. Variable initialization
42. Operator
43. Unary operator
44. Binary operator
45. Arithmetic operator
46. Assignment operator
47. L value and R value
48. Compound assignment operator
49. Increment operator
50. Post fix
51. Pre fix increment
52. Decrement operator
53. Operator precedence
54. Type casting
55. Implicit type casting
56. Explicit type casting
57. Comments
58. Single line comments
59. Multi line comments
60. Input
61. Standard input
62. Output
63. Standard output
64. Escape sequence
65. Scanf ( )
66. gets ( )
67. getch ()
68. getche ( )
69. printf ( )
70. puts ( )