C# Basic Laboratory Exercise

1. Write a C# Sharp program to print Hello and your name in a separate line.
Expected Output :
Hello: Atmiya Students

2. Write a C# Sharp program to print the sum of two numbers.

3. Write a C# Sharp program to print the result of dividing two numbers.

4. Write a C# Sharp program to print the result of the specified operations.
Test data:

- -1 + 4 * 6
- (35+ 5) % 7
- 14 + -4 * 6 / 11
- 2 + 15 / 6 * 1 - 7 % 2

Expected Output:
23
5
12
3

5. Write a C# Sharp program to swap two numbers.
Test Data:
Input the First Number : 5
Input the Second Number : 6
Expected Output:
After Swapping :
First Number : 6
Second Number : 5

6. Write a C# Sharp program to print the output of multiplication of three numbers which will be entered by the user.
Test Data:
Input the first number to multiply: 2
Input the second number to multiply: 3
Input the third number to multiply: 6
Expected Output:
2 x 3 x 6 = 36

7. Write a C# Sharp program to print on screen the output of adding, subtracting, multiplying and dividing of two numbers which will be entered by the user.
Test Data:
Input the first number: 25
Input the second number: 4
Expected Output:
25 + 4 = 29
25 - 4 = 21
25 x 4 = 100
25 / 4 = 6
25 mod 4 = 1

8. Write a C# Sharp program that takes a number as input and print its multiplication table.
Test Data:
Enter the number: 5
Expected Output:
5 * 0 = 0
5 * 1 = 5
5 * 2 = 10
5 * 3 = 15
....
5 * 10 = 50

9. Write a C# Sharp program that takes four numbers as input to calculate and print the average.
Test Data:
Enter the First number: 10
Enter the Second number: 15
Enter the third number: 20
Enter the four number: 30
Expected Output:
The average of 10 , 15 , 20 , 30 is: 18

10. Write a C# Sharp program to that takes three numbers(x,y,z) as input and print the output of (x+y).z and x.y + y.z.
Test Data:
Enter first number - 5
Enter second number - 6
Enter third number - 7
Expected Output:
Result of specified numbers 5, 6 and 7, (x+y).z is 77 and x.y + y.z is 72

11. Write a C# Sharp program that takes an age (for example 20) as input and prints something as "You look older than 20".
Test Data:
Enter your age – 25
Expected Output:
You look older than 25

12. Write a C# program to that takes a number as input and display it four times in a row (separated by blank spaces), and then four times in the next row, with no separation. You should do it two times: Use Console. Write and then use {0}.
Test Data:
Enter a digit: 25
Expected Output:
25 25 25 25
25252525
25 25 25 25
25252525

13. Write a C# program that takes a number as input and then displays a rectangle of 3 columns wide and 5 rows tall using that digit.
Test Data:
Enter a number: 5
Expected Output:
555
5 5
5 5
5 5
555

14. Write a C# program to convert from celsius degrees to Kelvin and Fahrenheit.
Test Data:
Enter the amount of celsius: 30
Expected Output:
Kelvin = 303
Fahrenheit = 86

15. Write a C# program remove specified a character from a non-empty string using index of a character.
Test Data:
Atmiya University
Sample Output:
Atiya University
Atmiya niversity

16. Write a C# program to create a new string from a given string (length 1 or more) with the first character added at the front and back.
Sample Output:
Input a string : The quick brown fox jumps over the lazy dog.
TThe quick brown fox jumps over the lazy dog.T

17. Write a C# program to check two given integers and return true if one is negative and one is positive.
Sample Output:
Input first integer:
-5
Input second integer:
25
Check if one is negative and one is positive:
True

18. Write a C# program to compute the sum of two given integers, if two values are equal then return the triple of their sum.

19. Write a C# program to get the absolute value of the difference between two given numbers. Return double the absolute value of the difference if the first number is greater than second number.

20. Write a C# program to check the sum of the two given integers and return true if one of the integer is 20 or if their sum is 20.

21. Write a C# program to check if an given integer is within 20 of 100 or 200.
Sample Output:
Input an integer:
25
False

22. Write a C# program to convert a given string into lowercase.
Sample Output:
write a c# sharp program to display the following pattern using the alphabet.

23. Write a C# program to print the odd numbers from 1 to 99. Prints one number per line.
Sample Output:
Odd numbers from 1 to 99. Prints one number per line.
1
3
5
7
9
...
95
97
99

24. Write a C# program to compute the sum of the first 500 prime numbers.
Sample Output:
Sum of the first 500 prime numbers:
3682913

25. Write a C# program and compute the sum of the digits of an integer.
Sample Output:
Input a number(integer): 12
Sum of the digits of the said integer: 3

26. Write a C# program to reverse the words of a sentence.
Sample Output:
Original String: Display the pattern like pyramid using the alphabet.
Reverse String: alphabet. the using pyramid like pattern the Display

27. Write a C# program to find the size of a specified file in bytes.
Sample Output:
Size of a file: 31

28. Write a C# program to convert a hexadecimal number to decimal number.
Sample Output:
Hexadecimal number: 4B0
Convert to-
Decimal number: 1200

29. Write a C# program to multiply corresponding elements of two arrays of integers.
Sample Output:
Array1: [1, 3, -5, 4]
Array2: [1, 4, -5, -2]
Multiply corresponding elements of two arrays:
1 12 25 -8

30. Write a C# program to create a new string of four copies, taking last four characters from a given string. If the length of the given string is less than 4 return the original one.
Sample Output:
Input a string : The quick brown fox jumps over the lazy dog.
dog.dog.dog.dog.

31. Write a C# program to check if a given positive number is a multiple of 3 or a multiple of 7.
Sample Output:
Input first integer:
15
True

32. Write a C# program to check if a string starts with a specified word.
Note: Suppose the sentence starts with "Hello"
Sample Data: string1 = "Hello how are you?"
Result: Hello.
Sample Output:
Input a string : Hello how are you?
True

33. Write a C# program to check two given numbers where one is less than 100 and other is greater than 200.
Sample Output:
Input a first number(<100): 75
Input a second number(>100): 250
True

34. Write a C# program to check if an integer (from the two given integers) is in the range -10 to 10.
Sample Output:
Input a first number: -5
Input a second number: 8
True

35. Write a C# program to check if "HP" appears at second position in a string and returns the string without "HP".
Test Data: PHP Tutorial
Sample Output:
P Tutorial

36. Write a C# program to find the largest and lowest values from three integer values.
Test Data:
Input first integer:
15
Input second integer:
25
Input third integer:
30
Sample Output
Largest of three: 30
Lowest of three: 15

37. Write a C# program to check the nearest value of 20 of two given integers and return 0 if two numbers are same.
Test Data:
Input first integer:
15
Input second integer:
12
Sample Output
15

38. Write a C# program to count a specified number in a given array of integers.
Test Data:
Input an integer: 5
Sample Output
Number of 5 present in the said array: 2

39. Write a C# program to check if a number appears as either the first or last element of an array of integers and the length is 1 or more.
Test Data:
Input an integer: 25
Sample Output
False

40. Write a C# program to compute the sum of all the elements of an array of integers.
Test Data:
Array1: [1, 2, 2, 3, 3, 4, 5, 6, 5, 7, 7, 7, 8, 8, 1]
Sample Output
Sum: 69

41. Write a C# program to check if the first element or the last element of the two arrays (length 1 or more) are equal.
Test Data:
Array1: [1, 2, 2, 3, 3, 4, 5, 6, 5, 7, 7, 7, 8, 8, 1]
Array2: [1, 2, 2, 3, 3, 4, 5, 6, 5, 7, 7, 7, 8, 8, 5]
Check if the first element or the last element of the two arrays (leng th 1 or more) are equal.
Sample Output
True

42. Write a C# program to rotate an array (length 3) of integers in left direction.
Test Data:
Array1: [1, 2, 8]
After rotating array becomes: [2, 8, 1]

43. Write a C# program to get the larger value between first and last element of an array (length 3) of integers.
Test Data:
Array1: [1, 2, 5, 7, 8]
Highest value between first and last values of the said array: 8

44. Write a C# program to create a new array of length containing the middle elements of three arrays (each length 3) of integers.
Test Data:
Array1: [1, 2, 5]
Array2: [0, 3, 8]
Array3: [-1, 0, 2]
New array: [2, 3, 0]

45. Write a C# program to check if an array contains an odd number.
Test Data:
Original array: [2, 4, 7, 8, 6]
Check if an array contains an odd number? True