Basic Input and Output & Math

1. Write a c program to print your name, student id, date of birth and mobile number.
   Note: End of the line print a new line.

Input	Output
	My Name : Nella Hasan My ID : 211-11-111 My DOB : 16 October 2022 My Mobile : +8801870179066

2. Your teacher would like to make a screen with the following characteristics:
   a. 1st line print 40 (*)
   b. 2nd line print (|) at the 1st and 40th position. And inside that, give 2 tab space (1 tab = 4 space) and then print **'DIU'**.
   c. Follow point (b) and instead of 'DIU' print **'CIS'**.
   d. Follow point (b) and instead of "DIU' print **'17'**.
   e. Follow the point (a).

   Note: End of the line print a new line.

Input	Output
	** | DIU | | CIS | | 17 | **

3. Take 3 character variables a, b and c. Take input from the user and store it. After that print in structural format shown below.

   First Line:
   a. Print the letter A, a space, the equals sign, a blank, the character stored in the first variable (a).
   b. Print the letter B, a space, the equals sign, a blank, the character stored in the first variable (b).
   c. Print the letter C, a space, the equals sign, a blank, the character stored in the first variable (c).

Second Line:

d. Print the letter A, a space, the equals sign, a blank, the character stored in the first variable (b).
e. Print the letter B, a space, the equals sign, a blank, the character stored in the first variable (c).
f. Print the letter C, a space, the equals sign, a blank, the character stored in the first variable (a).

Third Line:

g. Print the letter A, a space, the equals sign, a blank, the character stored in the first variable (c).
h. Print the letter B, a space, the equals sign, a blank, the character stored in the first variable (a).
i. Print the letter C, a space, the equals sign, a blank, the character stored in the first variable (b).

Input	Output
a c d	A = a, B = c, C = d A = c, B = d, C = a A = d, B = a, C = c
1 2 3	A = 1, B = 2, C = 3 A = 2, B = 3, C = 1 A = 3, B = 1, C = 2

4. Make a program that takes input his/her name, university name, faculty name and department name and show the desired output. Before taking any input from the user print a hint for example: if the user is trying to input the name then the name should be shown on the console. ***Look at the input line 3.***

Input	Output
Name: Nella Hasan **University:** Daffodil International University **Faculty:** Science and Information Technology **Department:** Computing and Information System	**Student Name:** Nella Hasan **University Name:** Daffodil International University **Faculty Name:** Science and Information Technology **Department Name:** Computing and Information System
Name: Fahad Ali **University:** AIUB **Faculty:** FSIT **Department:** BBA	**Student Name:** Fahad Ali **University Name:** AIUB **Faculty Name:** FSIT **Department Name:** BBA
Name: **University:** **Faculty:** **Department:**	

5. Imagine your friend gives you a date in the format of (dd/mm/yyyy) and asks you to convert in a different format like.
    a. mm-dd-yyyy
    b. yy/dd/mm
    c. dd-yy-mm

    Your work is to automate it via c programming.

Input	Output
21/02/2023	02-21-2023 23-21-02 21-23-02
08/05/2024	05-08-2024 24-08-05 08-24-05

6. Take 3 numbers from the user and then follow the instruction given below.
    a. Print 4 digits after number 1
    b. Print 3 digits after number 2
    c. Print 5 digits after number 3
    d. Print 1 digits after number 1

    Print the number sequences before taking input for a clear view look at the input section. When printing the output print A, B, C, D before each instruction.

Input	Output
Number 1: 1.25648256356 Number 2: 5.626100 Number 3: 4	A = 1.2565 B = 5.626 C = 4.00000 D = 1.3

7. To complete this task, you need to input two integer values and then multiply them. Store the result of the multiplication in a variable named "multiply". Finally, print the value of the "multiply" variable in the format shown in the example below.

Input	Output
Number 1: 9 Number 2: 5	Multiply: 45

8. To solve this problem, you should input four integer values: A, B, C, and D. Then, compute the difference between the product of A and B and the product of C and D **(A * B - C * D)**. Finally, print the resulting value of this calculation.

Input	Output
Number 1: 9 Number 2: 5 Number 3: 8 Number 4: 100	Result is: -755
Number 1: 80 Number 2: 4 Number 3: 6 Number 4: 30	Result is: 140

9. Make a c program to calculate the area of the triangle. Take base and height input from the user.

Input	Output
Base: 5 Height: 10	Area of Triangle: 25

10. Make a c program to calculate the area of the rectangular. Take length and width input from the user.

Input	Output
Length: 5 Width: 3	Area of Rectangular: 15

11. Make a program to calculate the perimeter of the rectangular. Take length and width input from the user.

Input	Output
Length: 85 Width: 13	Perimeter of Rectangular: 196

12. Make a c program to calculate the area of the cylinder. Take radius and height input from the user.

Input	Output
Radius: 6 Height: 10	Area of cylinder: 603.19

13. Write a C program that accepts an employee's ID, total worked hours of a month and the amount he received per hour. Print the employee's ID and salary (with two decimal places) of a particular month.

Input	Output
Employees ID: 342 working hrs: 8 Salary amount/hr: 15000	Employees ID = 342 Salary = 120000.00 Taka

14. Write a C program for **int a = 10/45*23%45/(45%4*21)**
15. Write a C program to Print true if following statements are right otherwise print false
    a. **4>5 && 5>4**
    b. **4>5 || 5>4**
16. To determine a car's average fuel consumption, you need to know the total distance traveled (in kilometers) and the total amount of fuel used (in liters). Using this information, you can calculate the car's average fuel consumption.

Input	Output
500 35.0	14.286 km/l
2254 124.4	18.119 km/l

17. The objective of this problem is to input various pieces of information related to two products, including the product code, number of units purchased, and unit price. Once all the necessary information has been entered for both products, you need to calculate the total amount to be paid for the entire purchase. Finally, the resulting value should be displayed.

Input	Output
12 **1 5.30** 16 **2 5.10**	Total Cost: 15.50

18. Make a c program to calculate the area of the sphere. Take radius and width input from the user.

Input	Output
Radius: 6	Area of sphere: 452.39

19. Make a c program to calculate the sum and average of 4 numbers. Take this number from the users.

Input	Output
Number 1: 80	Sum: 120

Input	Output
Number 2: 4 Number 3: 6 Number 4: 30	Average: 30

20. Make a c program to calculate the Farenheit to celsius. The formula is **(90°F − 32) × 5/9**.

Input	Output
Farenheit: 90	Fahrenheit 90 = celsius 32.22