This is your post lab , you will submit this lab online. Lab will be evaluated on the basis on your approach and logic.

If any clues of cheating caught, then responsibility is yours. No google or any other tool is allowed. If there is any problem, then discuss with us not with your colleagues.

Lab Submission time is Sunday 10pm.

Email your lab On : Bcsf20m012@pucit.edu.pk (Cc: Bcsf19m002@pucit.edu.pk)

1. Write a C program that takes two integers as input and prints their sum.
2. Create a program that reads a character and prints it.
3. Write a program that reads a floating-point number and prints it with two decimal places.
4. Write a C program to convert temperature from Fahrenheit to Celsius using the formula: Celsius = (Fahrenheit - 32) / 1.8.
5. Create a program that calculates the simple interest based on principal amount, rate, and time.
6. Write a C program to determine whether a given year is a leap year or not.
7. Develop a program that reads three integers and prints the largest of the three.
8. Write a program that reads a character and checks if it's a vowel or a consonant.
9. Create a program that reads a date (day, month, year) and prints it in the format: "DD/MM/YYYY".
10. Develop a program that reads a floating-point number and prints it in scientific notation.
11. Develop a program that reads a student's exam score (out of 100) and assigns a grade based on the following criteria:
90-100: A
80-89: B
70-79: C
60-69: D
Below 60: F
12. Write a simple calculator program that reads two numbers and an operator (+, -, *, /) from the user and performs the corresponding operation.
13. Develop a program that simulates a traffic light. It reads the color (red, yellow, green) and prints a message indicating whether it's safe to go or should stop.
14. Develop a program that reads an integer N and calculates its factorial (N!) using a for loop.
15. Create a program that reads an integer and prints its reverse. For example, if the input is 12345, the program should print 54321.
16. Write a program to print the following right-angled triangle pattern:

```
*
**
***
****
*****
```

17. Write a program that reads an integer and checks whether it's a palindrome (reads the same forwards and backwards) using a for loop.
Let's play a little bit.
18. Develop a number guessing game where the program generates a random number between 1 and 100, and the user has to guess it. Provide hints such as "Too low" or "Too high" after each guess. Use a while loop for the game and include a condition to exit when the user guesses correctly.
19. Write a program that prints the numbers from 1 to 100. For multiples of 3, print "Fizz" instead of the number. For multiples of 5, print "Buzz" instead. For numbers that are multiples of both 3 and 5, print "FizzBuzz."
20. Develop a program to print a diamond pattern like the following:

```
  *
 ***
*****
 ***
  *
```