**Tehreem ijaz**

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**Lab 8 pf**

**Lab Task 1:**

Write a C++ program that will print the following pattern using Nested For Loop.

**Sample Output:**



**#include <iostream>**

**using namespace std;**

**int main() {**

**for (int i = 1; i <= 7; i++) { // Outer loop for rows**

**for (int j = 1; j <= i; j++) { // Inner loop for stars in each row**

**cout << "\*";**

**}**

**cout << endl; // Move to the next line after each row**

**}**

**return 0;**

**}**

**Lab Task 2:**

Write a c++ program to print the multiplication table of the numbers from

0

to

5

Using Nested For Loop

#include <iostream>

using namespace std;

int main() {

for (int i = 0; i <= 5; i++) { // Outer loop for numbers 0 to 5

for (int j = 1; j <= 10; j++) { // Inner loop for multiplication up to 10

cout << i << " x " << j << " = " << i \* j << endl;

}

cout << endl; // Add a blank line between tables

}

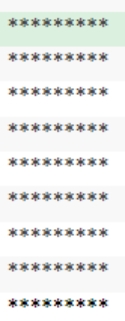
return 0;

}

**Lab Task 3:**

Write a C++ program that will print the following pattern using Nested For Loop.

**Sample Output:**



**#include <iostream>**

**using namespace std;**

**int main() {**

**for (int i = 1; i <= 7; i++) { // Outer loop for rows**

**for (int j = 1; j <= 5; j++) { // Inner loop for columns (5 stars in each row)**

**cout << "\*";**

**}**

**cout << endl; // Move to the next line after each row**

**}**

**return 0;**

**}**

**Lab Task 4:**

Write a C++ program to find the factorial of a given number using Nested For Loop.

#include <iostream>

using namespace std;

int main() {

int number, factorial = 1;

cout << "Enter a number to find its factorial: ";

cin >> number;

for (int i = 1; i <= number; i++) { // Outer loop for multiplying numbers

factorial = 1; // Reset factorial for nested loop

for (int j = 1; j <= i; j++) { // Inner loop for calculating factorial

factorial \*= j;

}

cout << "Factorial of " << i << " = " << factorial << endl;

}

return 0;

}

**Lab Task 5:**

Write a C++ program to find the sum of the digits of a given number using Nested For Loop.

#include <iostream>

using namespace std;

int main() {

int number, sum = 0;

cout << "Enter a number to find the sum of its digits: ";

cin >> number;

for (int temp = number; temp > 0; temp /= 10) { // Outer loop for extracting digits

int digit = temp % 10; // Extract the last digit

sum += digit; // Add the digit to the sum

}

cout << "Sum of the digits of " << number << " = " << sum << endl;

return 0;

}