Day 1 UID- 22BCS10188

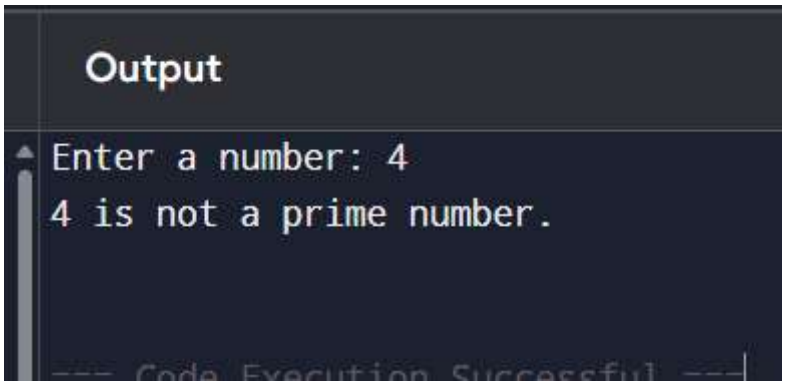
Que 1 - Check if a Number is Prime

Code -

Check if a Number is Prime.cpp

```cpp
#include <iostream>
#include <cmath>

bool isPrime(int n) {
    if (n <= 1) {
        return false;
    }
    for (int i = 2; i <= std::sqrt(n); ++i) {
        if (n % i == 0) {
            return false;
        }
    }
    return true;
}

int main() {
    int number;
    std::cout << "Enter a number: ";
    std::cin >> number;

    if (isPrime(number)) {
        std::cout << number << " is a prime number." << std::endl;
    } else {
        std::cout << number << " is not a prime number." << std::endl;
    }

    return 0;
}
```

Output



Que2 - Print Multiplication Table of a Number

Code

Print Multiplication Table of a Number.cpp

```cpp
#include <iostream>
using namespace std;

int main() {
    int n;
    cout << "Enter a number: ";
    cin >> n;

    for (int i = 1; i <= 10; ++i) {
        cout << n << " x " << i << " = " << n * i << endl;
    }

    return 0;
}
```

Output

```
Enter a number: 4
4 x 1 = 4
4 x 2 = 8
4 x 3 = 12
4 x 4 = 16
4 x 5 = 20
4 x 6 = 24
4 x 7 = 28
4 x 8 = 32
4 x 9 = 36
4 x 10 = 40
```

Que 3 Print Odd Numbers up to N

Print Odd Numbers up to N.cpp

```cpp
#include <iostream>
using namespace std;

int main() {
    int n;
    cout << "Enter a number: ";
    cin >> n;

    for (int i = 1; i <= n; i++) {
        if (i % 2 != 0) {
            cout << i << " ";
        }
    }

    return 0;
}
```

**Output**

```
Enter a number: 7
1 3 5 7

=== Code Execution Successful ===
```

Que 4 - Sum of Natural Numbers up to N

Sum of Natural Numbers up to N.cpp

```cpp
#include <iostream>
using namespace std;

int main() {
    int n;
    cout << "Enter a positive integer: ";
    cin >> n;

    if (n > 0) {
        int sum = n * (n + 1) / 2;
        cout << "Sum of natural numbers from 1 to " << n << " is: " << sum << endl;
    } else {
        cout << "Please enter a positive integer." << endl;
    }

    return 0;
}
```

```
Enter a positive integer: 4
Sum of natural numbers from 1 to 4 is: 10


=== Code Execution Successful ===
```

Que 5 Sum of Odd Numbers up to N.cpp

Sum of Odd Numbers up to N.cpp

```cpp
#include <iostream>

int sumOfOddNumbers(int n) {
    int sum = 0;
    for (int i = 1; i <= n; i += 2) {
        sum += i;
    }
    return sum;
}

int main() {
    int n;
    std::cout << "Enter a number: ";
    std::cin >> n;

    int result = sumOfOddNumbers(n);
    std::cout << "Sum of odd numbers up to " << n << " is: " << result << std::endl;

    return 0;
}
```