

Day 1 UID- 22BCS10188

Que 1 - Check if a Number is Prime

Code -

```
Check if a Number is Prime.cpp
1  #include <iostream>
2  #include <cmath>
3
4  bool isPrime(int n) {
5      if (n <= 1) {
6          return false;
7      }
8      for (int i = 2; i <= std::sqrt(n); ++i) {
9          if (n % i == 0) {
10             return false;
11         }
12     }
13     return true;
14 }
15
16 int main() {
17     int number;
18     std::cout << "Enter a number: ";
19     std::cin >> number;
20
21     if (isPrime(number)) {
22         std::cout << number << " is a prime number." << std::endl;
23     } else {
24         std::cout << number << " is not a prime number." << std::endl;
25     }
26
27     return 0;
28 }
```

Output

```
Output
Enter a number: 4
4 is not a prime number.
--- Code Execution Successful ---
```

Que2 - Print Multiplication Table of a Number

Code

```
Print Multiplication Table of a Number.cpp
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int n;
6      cout << "Enter a number: ";
7      cin >> n;
8
9      for (int i = 1; i <= 10; ++i) {
10         cout << n << " x " << i << " = " << n * i << endl;
11     }
12
13     return 0;
14 }
```

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

```
up to N.cpp • Check if a Number is Prime.cpp Print Odd
Print Odd Numbers up to N.cpp
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int n;
6      cout << "Enter a number: ";
7      cin >> n;
8
9      for (int i = 1; i <= n; i++) {
10         if (i % 2 != 0) {
11             cout << i << " ";
12         }
13     }
14
15     return 0;
16 }
```

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

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int n;
6      cout << "Enter a positive integer: ";
7      cin >> n;
8
9      if (n > 0) {
10         int sum = n * (n + 1) / 2;
11         cout << "Sum of natural numbers from 1 to " << n << " is: " << sum << endl;
12     } else {
13         cout << "Please enter a positive integer." << endl;
14     }
15
16     return 0;
17 }
```

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

```
1  #include <iostream>
2
3  int sumOfOddNumbers(int n) {
4      int sum = 0;
5      for (int i = 1; i <= n; i += 2) {
6          sum += i;
7      }
8      return sum;
9  }
10
11 int main() {
12     int n;
13     std::cout << "Enter a number: ";
14     std::cin >> n;
15
16     int result = sumOfOddNumbers(n);
17     std::cout << "Sum of odd numbers up to " << n << " is: " << result << std::endl;
18
19     return 0;
20 }
```

```
Enter a number: 5
Sum of odd numbers up to 5 is: 9
```

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