

## Loops

### (Assignment Solutions)

**Question 1 :**

```
//Qs : Factorial of a number n

int n = 6;
int fact = 1;
for(int i=1; i<=n; i++) {
    fact *= i;
}

cout << "factorial of " << n << " = " << fact << "\n";
```

**Question 2 :**

```
//Qs : Multiplication Table of n

int n = 8;
for(int i=1; i<=10; i++) {
    cout << (n * i) << " ";
}
cout << endl;
```

**Question 3 :**

```
//Qs : Check for Armstrong Number

int n = 371;
int num = n;
int cubeSum = 0;

while(num > 0) {
    int lastDig = num % 10;
    cubeSum += lastDig * lastDig * lastDig;
    num /= 10;
}

if(n == cubeSum) {
```

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```
    cout << "Armstrong number\n";
} else {
    cout << "NOT an Armstrong number\n";
}
```

**Question 4 :**

```
//Qs : Print Primes from 2 to N
int N = 15;
for(int i=2; i<=N; i++) {
    int curr = i; //current number to check for
    bool isPrime = true;
    for(int j=2; j*j<=i; j++) {
        if(curr % j == 0) {
            isPrime = false;
        }
    }

    if(isPrime) {
        cout << curr << " ";
    }
}
cout << endl;
```

**Question 5 :**

```
//Qs : Print N Fibonacci Numbers
int n = 10;
int first = 0, sec = 1;
cout << first << " " << sec << " ";

for(int i=2; i<n; i++) {
    int third = first + sec;
    cout << third << " ";
    first = sec;
    sec = third;
}

cout << "\n";
```

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