

## MODULE 3 ASSESSMENT

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Course & Year: BSCS – 1

- Write a code that would determine the count and sum of the prime numbers within a particular range positive. In which it would require the use of the following functions:
  - `bool isPrime (int x)` // this function would determine if integer x is prime or not. Return 1 if x is prime 0 if otherwise
  - `int countPrimeInRange (int start, int end)` // count the primes in range by using the `isPrime (int x)` function
  - `int sumPrimeInRange (int start, int end)` // find the sum of primes in range by using the `isPrime (int x)` function

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

bool isPrime (int x)
int countPrimeInRange (int start, int end);
int sumPrimeInRange (int start, int end);

int main()
{
    int start;
    int end;

    cout << "Start Range: ";
    cin >> start;
    cout << endl << "End Range: ";
    cin >> end;
    cout << endl << "Count of Primes: " << countPrimeInRange (start, end) << endl;
}

bool isPrime (int x)
{
    int num = 2;
    bool check = false;
    for (num; num <= x/2; num++)
    {
        if (x % num == 0)
        {
            check = false;
            return 0;
        }
    }
    else
    {
        check = true;
    }
}

if (check == true)
{
    return 1;
}
}
```

```

int countPrimeInRange (int start, int end)
{
    int numofPrime = 0;
    for (start; start <= end; start++)
    {
        if (isPrime (start) == 1)
        {
            numofPrime += 1;
        }
    }
    return numofPrime;
}

```

```

int sumPrimeInRange (int start, int end)
{
    int sumofPrime = 0;
    for (start; start <= end; start++)
    {
        if (isPrime (start) == 1)
        {
            sumofPrime += start;
        }
    }
    return sumofPrime;
}

```