

### Laboratory Assignment 3

Given the C program below with the given main and checkPrimeNumber functions. Re-write this code:

1. Re-write the function checkPrimeNumber in assembler and call it from the main written in C;
2. Re-write the main function in assembler and use it to call the function checkPrimeNumber written in C;
3. Re-write both the main and checkPrimeNumber functions in assembler.

You should submit three set of codes for this assignment.

```
#include <stdio.h>

int checkPrimeNumber(int n);
int main()
{
    int n1, n2, i, flag;

    printf("Enter two positive integers: ");
    scanf("%d %d", &n1, &n2);
    printf("Prime numbers between %d and %d are: ", n1, n2);

    for(i=n1+1; i<n2; ++i)
    {
        // i is a prime number, flag will be equal to 1
        flag = checkPrimeNumber(i);

        if(flag == 1)
            printf("%d ",i);
    }
    return 0;
}
```

```
// user-defined function to check prime number
int checkPrimeNumber(int n)
{
    int j, flag = 1;

    for(j=2; j <= n/2; ++j)
    {
        if (n%j == 0)
        {
            flag = 0;
            break;
        }
    }
    return flag;
}
```