EX 11	PROGRAM TO DISPLAY ALL PRIME NUMBERS BETWEEN TWO INTERVALS USING FUNCTIONS
DATE:	

AIM:

To display all prime numbers between two intervals using functions

ALGORITHM:

Step1: Start the Program

Step 2: Get the intervals

Step 3: Find and Display the prime numbers ie., the numbers that are divisible by 1 and itself between the intervals

Step 4: Stop the Program

PROGRAM:

```
#include <stdio.h>

/* Function declarations */ int isPrime(int num); void

printPrimes(int lowerLimit, int upperLimit); int

main()

{

int lowerLimit, upperLimit;

printf("Enter the lower and upper limit to list primes: "); scanf("%d%d",

&lowerLimit, &upperLimit);
```

```
/* Call function to print all primes between the given range*/

printPrimes(lowerLimit, upperLimit); return 0;


        }
        /* Print all prime numbers between lower limit and upper limit*/ void

        printPrimes(int lowerLimit, int upperLimit)

        {

        printf("All prime number between %d to %d are: ", lowerLimit, upperLimit);

        while(lowerLimit <= upperLimit)

        {

        /* Print if current number is prime*/ if(isPrime(lowerLimit))

        {

        printf("%d, ", lowerLimit);
}

        lowerLimit++;
}
}

        /*Check whether a number is prime or not*/

        /*Returns 1 if the number is prime otherwise 0*/ int

        isPrime(int num)

        {

        int i;
```

```
        for(i=2; i<=num/2; i++)

        {

        /* If the number is divisible by any number*/
        /*other than 1 and self then it is not prime*/ if(num % i

        == 0)

        {

        return 0;  }
}

        return 1;  }
```

OUTPUT:

```
Enter the lower and upper limit to list primes:

1 100

All prime number between 1 100 are 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43,
47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97
```

RESULT:

Thus the C Program to find the prime numbers between two intervals has been executed and verified.